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Report to Congress Industrial Cost Exclusion

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Report to Congress
Industrial Cost Exclusion

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16. ABSTRACT

This report is a study of the effect of the Industrial Cost Exclusion (ICE) on the construction grants program. This study and the report were directed by the Congress in section 4 of a recent amendment to the Federal Water Pollution Control Act (Public Law 96-483). The report reflects the full range of opinions expressed to the Agency during the conduct of our study. Comments and data were provided by water pollution control agencies of the several States, communities and industries that will be affected by the industrial cost exclusion, interested public and private interest groups and other parties.

The impacts of ICE have been assessed from both the industrial and municipal perspectives in order to objectively analyze the potential consequences. Further, the report analyzes the impacts on rural communities and on industries in economically distressed areas and areas with high unemployment. Specific communities and projects are identified and each State is analyzed in terms of short-term and long-term effects of ICE.

This report contains a factual analysis of the effect of the ICE as well as a review of the impacts of a number of alternatives to the ICE requirements.

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WASHINGTON, D.C. 20460

MAR 13 1981

THE ADMINISTRATOR

Honorable Thomas P. O'Neill, Jr.
Speaker of the House of Representatives
Washington, D.C. 20515

Dear Mr. Speaker:

I am pleased to submit to the Congress our report on the study of the effect of the Industrial Cost Exclusion (ICE) on the construction grants program. This study and the report were directed by the Congress in section 4 of a recent amendment to the Federal Water Pollution Control Act (Public Law 96-483). This report reflects the full range of opinions expressed to the Agency during the conduct of our study. Comments and data were provided by water pollution control agencies of the several States, communities and industries that will be affected by the industrial cost exclusion, interested public and private interest groups and other parties.

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This report contains a factual analysis of the effect of the ICE as well as a review of the impacts of a number of alternatives to the ICE requirements.

I trust that this report will be satisfactory to you and the Public Works and Transportation Committee.

Sincerely yours,

Walter C. Barber
Acting Administrator

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 13 1981

THE ADMINISTRATOR

Honorable George Bush
President of the Senate
Washington, D.C. 20510

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Walter C. Barber
Acting Administrator

REPORT TO CONGRESS
INDUSTRIAL COST EXCLUSION

MARCH 1981

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This report to Congress on the effect of the Industrial Cost Exclusion is required by Public Law 96-483, enacted on October 21, 1980. The statute requires the report to be submitted to Congress by March 15, 1981.

The required study was conducted between November 1980 and January 1981. Since completing the study, President Reagan has proposed a reduction in appropriations and a more cost-effective targeting of the Municipal Wastewater Treatment Grant Program.

Specific legislation to implement President Reagan's reforms will be forwarded to Congress in the near future. Therefore, the analyses in this report do not reflect President Reagan's proposed reforms.

Public Law 96-483

Section 3. Section 201 of the Federal Water Pollution Control Act is amended by adding at the end thereof the following new subject:
"(k) No grant made after November 15, 1981, for a publicly owned treatment works, other than for facility planning and the preparation of construction plans and specifications, shall be used to treat, store, or convey the flow of any industrial user into such treatment works in excess of a flow per day equivalent to fifty thousand gallons per day of sanitary waste. This subsection shall not apply to any project proposed by a grantee which is carrying out an approved project to prepare construction plans and specifications for a facility to treat wastewater, which received its grant approval before May 15, 1980."
Section 4. The Administrator of the Environmental Protection Agency shall study and report to the Congress not later than March 15, 1981, on the effect of the amendment made by section 3 on the construction of publicly owned treatment works, industrial participation in publicly owned treatment works, treatment of industrial discharges, and the appropriate degree of Federal and non-Federal participation in the funding of publicly owned treatment works.

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EXECUTIVE SUMMARY

INTRODUCTION

In 1972, Congress enacted the Federal Water Pollution Control Act (FWPCA), which required many municipalities and industries either to upgrade existing wastewater treatment facilities or to construct new ones, if necessary to meet treatment standards. The FWPCA included a multibillion dollar construction grant program which provided for all industrial users of a municipal wastewater treatment system to repay the Federal portion of a Clean Water Construction Grant. Under this provision, called Industrial Cost Recovery (ICR), municipalities received 75 percent of treatment facility capital costs, with the requirement that the industrial share be repaid by the industries using the treatment facility. Thus, industries using publicly owned treatment works (POTWs) rather than financing their own self-treatment works, repaid over 30 years the Federal share of the construction costs attributable to the industry's use of the POTW. Industrial payments were made directly to the grantees (municipalities) which, in turn, returned 50 percent to the U.S. Treasury, retained 40 percent for future facility improvements, and used the remaining 10 percent for other municipal expenses, including the cost of administering the ICR system. This amounted to a 30-year, unsecured, interest-free loan via the Federal grant process and the ICR provision.

As ICR progressed, there were increasing reports from grantees regarding financial and administrative burdens associated with coordinating the collection of payments from industries. To ameliorate this situation, the 1977 Clean Water Act revised ICR so that small industries whose process wastewater was less than the equivalent of 25,000 gallons per day of normal domestic wastewater were excluded from payment requirements. Individually these industries did not significantly contribute to construction costs, but collectively they placed an administrative strain on grantees. In addition, these 1977 amendments placed a moratorium on collection of ICR payments until July 1979, while the Environmental Protection Agency (EPA) studied the ICR program and reviewed its effectiveness and while legislative alternatives were considered.

In January 1979 the mandated study, conducted by an EPA contractor, Coopers and Lybrand, was presented to Congress with the conclusion that ICR was not effective in accomplishing its legislated purpose. However, because this study had been conducted early in the implementation of ICR with limited data, Congress extended the moratorium on ICR to July 1980, while EPA prepared its own analysis of ICR's effectiveness.

The EPA study, completed in May 1980, concluded that ICR could be effective if some changes were made, and recommended retention of the program in a modified form. Both Houses of Congress held hearings and reviewed testimony from all parties concerned. It concluded that ICR should be repealed to allow grantees and industries to develop equitable grant repayment provisions on a case-by-case basis. Public Law 96-483 of October 21, 1980, thus repealed Industrial Cost Recovery as a condition of Federal grant awards for the construction of publicly owned treatment works.

An amendment to P.L. 96-483 (Section 3) was the Industrial Cost Exclusion (ICE) provision, which made all industries with process waste in excess of a flow per day equivalent to 50,000 gallons per day of sanitary waste ineligible for Clean Water Construction Grants awarded after November 15, 1981. This ICE provision differs from ICR in that it is a method of calculating the Federal share of capital costs for construction of wastewater treatment systems while ICR is a cost pay-back mechanism. An additional amendment, Section 4 of P.L. 96-483, requires EPA to study and report to the Congress the potential effect of ICE on the construction of publicly owned treatment works, the treatment of industrial discharges, the appropriate degree of Federal and non-Federal participation in the funding of POTWs, and the overall impact on municipalities and industries; this report is in response to this mandate.

THE EPA STUDY

EPA compiled information from various sources documenting the impact that ICE will have on industries and on the communities in which they are located. An announcement appeared in the December 1, 1980, Federal Register requesting comments from municipalities, industries, and other interested parties regarding the potential effects of ICE. In addition, the ten EPA regions prepared data on demographic features and wastewater flow characteristics within their respective areas. Specific industries and trade associations, such as dairies, breweries, and food processors, submitted assessments of the impact of ICE on their operations. Economic data were also contributed by the three communities which had participated in a case study: Watsonville, California; Gloversville-Johnstown, New York; and Milwaukee, Wisconsin. This EPA study includes qualitative analyses of industrial and municipal perceptions of the potential effect of ICE on these three cities, and discusses alternative funding sources for those industries planning to self-treat or use a POTW.

MUNICIPAL PERSPECTIVE

Federally mandated wastewater treatment requirements have major financial impacts on local communities. A community must raise sufficient funds for the local share of capital costs and for operation and maintenance of facilities to comply with sewage discharge requirements. At present, there is considerable community concern over inadequate resources to meet these demands.

SHORT-TERM EFFECTS OF ICE

This section of the EPA report to Congress analyzes the short-term effects and potential impacts of ICE on municipalities, and includes possible savings to EPA from not funding major industrial flow capacity to POTWs and the allocation of the cost of funding such industrial capacity among citizens and industries. Since ICE decreases the amount of Federal funding for POTW construction, it requires communities to seek alternate financing arrangements for industrial discharges in excess of a flow per day equivalent to 50,000 gallons per day of sanitary waste into publicly owned treatment works.

For this analysis, data from 48 States and 7 territories totaling 402 communities were used. Evaluation of impacts of ICE on these communities considered population, per capita income, size of treatment plant, amount of industrial flow, total cost of a proposed POTW, the cost of the industrial portion, and the unemployment rate.

General effects on communities are that any net savings to EPA from ICE will be limited by the delays that ICE itself will cause, that the increase in costs of POTW projects may affect the profitability and viability of industries, and that communities that have already built POTWs have a competitive advantage over those affected by ICE. Municipalities that built plants under Industrial Cost Recovery received 75 percent grants for capital costs and are no longer required to pay back these funds and can charge lower sewage rates to industries than can ICE-affected municipalities.

Costs to Communities

A major finding from the analysis of the impact of ICE in the short term is that the costs are not uniform across communities. The severity of the impact on any community depends on the percentage of industrial flow, the size of the community, and its relative wealth. It must also be noted that the median household income in nonmetropolitan areas is 20 percent less than the median household income in metropolitan areas. On average, ICE will turn a 25 percent non-Federal share of costs to communities into a 40 percent non-Federal share. From the point of view of the community, ICE will increase the non-Federal share by 60 percent. The average additional one-time capital charge per household is $89 with a range from $1 to $10,000 in the most extreme case. However, because the largest per household costs without ICE already occur in the small towns and cities (less than 50,000), ICE will pose some degree of financial burden. Significant financial burdens may occur in 20 percent of affected communities.

Another factor to be considered in evaluating ICE effects on communities is that the provision will result in delays of construction of POTWs while alternate financing is sought, new agreements with industries are negotiated, public meetings are held, and facilities plans are revised or redone completely. The effects of these delays will be increased costs from inflation, greater borrowing costs, and greater administrative costs. In real terms, delays alone from ICE will increase the non-Federal share of costs to communities from 1 percent to 18 percent.[1]

Possible Community Responses

There are six possible responses, with variations, available to communities to deal with increased costs resulting from ICE. These are:

1. The community may raise the ICE portion itself through a one-time charge on its citizens and/or by borrowing. In this option the community pays

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[1] Calculations based on President Reagan's economic assumptions suggest a similar, or parallel, range of costs.

as a whole for the industrial capacity in a POTW excluded from Federal support under ICE.

2. The community may require affected industries to finance themselves through "up-front" payments to the municipality at the time of construction. Apart from the effects of delay, this option would not result in a higher debt service obligation to the community, but could cause significant economic effects on industrial users.

3. The community may share with industry the cost of POTW construction through an increase in property taxes or by industries servicing the debt.

4. Industry may choose self-treatment. If the percentage of industrial flow is high to a POTW, this option may result in fewer economies of scale after ICE which would, in turn, result either in higher user charges or in lowered costs from alternative residential treatment methods such as lagoons or septic systems.

5. A community with a high percentage of industrial flow may form a non-profit public benefit corporation jointly owned by the city and industries. Under this option, the municipality would receive no EPA assistance and could avoid some Federal and State requirements regarding construction.

6. A community may cancel or postpone the building of a treatment plant indefinitely.

It is suggested that 46 percent of affected communities, those with a $100 or less one-time per household charge, and possibly the next 34 percent with a $100-400 per household charge, could take a "cost minimizing" approach of (1) combining industrial self-treatment and residential alternative treatment, or (2) charging both industry and residents to protect its bond rating and to preserve jobs. However, some communities are too small and too poor to remain viable under any of the options listed, and would need assistance to comply with the requirements of the Clean Water Act. Tables in the report present specific percentages and cost impact by community, show the distributions of costs of ICE among population categories, name the communities with one-time capital charges per household greater than $400, and report the projected effects of inflation and increased interest charges resulting from construction delays.

Short-Term Effects Evaluation

The total cost of construction of projects affected by ICE is approximately $8 billion with the excluded industrial portion of these projects topping $1 billion. These figures, however, will increase for several reasons. Inflation will increase both the Federal and non-Federal share of POTW construction projects, thus increasing the capital costs of construction per household to greater than 1980 figures. Further, localities will pay a larger finance charge on sums borrowed, and there will be added administrative costs associated with aspects of wastewater treatment that are not eligible for grant funding.

This report considers the effects on communities of construction delays of one year or three years, terming these evaluations high-low analyses, or high option-low option estimates. These evaluations were obtained by projecting the growth of the median household income as a measure of a community's ability to absorb an increase in the non-Federal share of POTW financing. In all, five financial variables were considered:[2]

1. Increases in construction costs of sewage treatment plants;
2. Length of delay--either one or three years;
3. The annual increase in median household income, 7.5 percent under low option, 10 percent under high option;
4. The interest rate on tax-exempt bonds, 8-1/2 percent and 11 percent;
5. The length of tax-exempt bonds, 20 or 30 years.

If the rate of inflation of construction costs and interest rates exceed the rate of increase in the median household income, delays resulting from ICE will add significant costs to communities. It is projected that the combined effects of higher construction costs and financing charges would add 1-15 percent for a one-year delay and 0.5-18 percent for a three-year delay.

If a community subsidizes the financing of industrial capacity to its POTW, the total increase in costs under a one-year delay would be about 80 percent and about 100 percent under a three-year delay. Any possibility of a reduction in the Federal share of a project if industries paid the cost of POTW industrial capacity under a one-year delay would be eliminated under a three-year delay.

Summary

In general, EPA analysis of the short-term effects of ICE on municipalities indicates that while the costs of ICE can be substantial, the costs of construction delays to Federal, State, and local governments may be a transitory phenomenon in the next four to five years in communities with well-defined plans now.

However, P.L. 96-483 will extend the planning period for POTW construction projects, and to that extent may decrease any reduction in the Federal share realized. It is estimated that delays greater than two years may eliminate any savings to EPA from the ICE provision. Many communities will be unable to raise the money for a 40+ percent local share before inflation and finance charge increases.

For specific projects the projected breakeven point for EPA's short-term savings from ICE is about two years of delay. This analysis, however, assumes that unobligated balances remain uncommitted. To the extent that States can fund other projects that are "ready to go," the Federal funds excluded from industrial users will remain intact, undiminished by delay. The technical section of this report presents the results of all calculations and tabulations by community, percentage of cost increases, and formulas of analysis used to obtain projections.

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[2] The current economic assumptions of the Administration suggest the following values for these variables: Median household income, 10.25 percent; annual increases in construction costs of sewage treatment plants, 8-13 percent; interest rates on tax-exempt bonds, 7 percent and 11 percent.

LONG-RANGE IMPACTS OF ICE

Long-range impacts of ICE concern the fact that many local communities are already near the margin of their financial capabilities. Exclusion of Federal funding must be viewed within the overall context of local sewerage expenditures and local financial viability.

OVERVIEW OF SEWAGE TREATMENT COSTS AND LOCAL FINANCIAL CAPABILITY

While there is a wide variation between communities in the expected cost burden of future sewerage costs, it is expected that these costs will continue to rise for all communities. Cost impact will be greatest for older urban centers with major rehabilitation needs and for small communities facing high per capita costs.

Increasing Sewage Treatment Costs

Several factors influencing the increases in sewage treatment costs nationally are listed and summarized below:

1. Clean Water Act Requirements - Most communities have not yet faced costs of meeting these requirements.

2. Non-eligible Costs - These pollution control costs include new collection system costs for new populations, operation and maintenance (O&M), replacement costs, and interest.

3. Inflation and the Cost Index for O&M and Construction - Inflation will affect the cost components of labor, materials, equipment, chemicals, and energy.

4. Added O&M Costs for Higher Levels of Treatment - Many communities will face higher O&M costs associated with treating sewage at levels higher than secondary.

5. Meeting the Backlog of Deferred Maintenance - Many cities, particularly in the Northeast and Midwest, that have cut back on maintenance spending must soon face massive maintenance backlogs.

Increasing Pressures on Revenues

The financial capability of a community to build and operate POTWs is not only a function of the cost of wastewater treatment, but also the general financial condition of the community based on personal income, population, and property value increases and decreases, caps on taxes and expenditures, inflation rates, level of intergovernmental aid, municipal bond interest rates, and the national and regional economy.

Three trends pointing to sharply increased pressures on municipal revenues in the near future are:

- Increased fiscal stress
- Decrease in Federal assistance to cities
- Increase in competition for scarce resources

Costs Estimates

A national cost estimate for wastewater treatment expenses is difficult because of the lack of direct, unequivocal data. Additional difficulties concern the wide variety of local governments possessing different fiscal systems and operating under different State laws, and the large scope of current pollution control activities. However, EPA has developed some cost estimates and projections.

Total direct sewerage expenditures have increased rapidly in recent years, at an annual rate of more than 15 percent. The 1980 Needs Survey estimates that local capital and O&M costs in 1980 were $4-5 billion.

A projection model estimates that total direct sewerage costs will increase 88 percent during the 1978-1990 period. Per capita costs are expected to increase 68 percent during the same period. In addition, there is expected to be a 150 percent increase in the State and local share of total sewerage costs.

These estimates do not reflect increases in future interest payments on debt; since it is expected that there will be pressure for increased local borrowing, the estimated expenditure increases will be higher than those cited here. These figures also do not reflect inflationary increases and the fact that many localities can expect increases higher than the national average.

Small Communities

Financial problems of small communities affect a large segment of the U.S. population. (More than 38 percent [1970 Census] of the population resides in communities under 10,000.) The financial issues facing these small communities are a result of the following factors:

1. Availability of Financial Resources

Lower household income of small communities results in a smaller resource base; governmental expenditures have risen faster than revenues; there are impediments to bond financing that place small communities at a disadvantage.

2. High Cost of Sewering Small, Dispersed Populations

The per capita costs for conventional sewage treatment are higher in small communities; a diseconomy of scale results in higher operation and maintenance costs; dispersed populations necessitate higher collection costs; there is reluctance to use on-site systems because of pollution and public health concerns.

3. Limited Financial Management Capability

Small towns have little need for financial management expertise and must obtain outside assistance in this area if needed. Many rural localities have no annual management plans, no fiscal accounting, and no middle management, and may have sporadic work schedules with no written policies or task procedures.

OLDER URBAN CENTERS

A major problem for many large urban centers is the age of the sewer infrastructure and the attendant large-scale replacement or rehabilitation needs. The following is a brief outline of the major financial issues facing these older, large urban areas based on the 1978 EPA Needs Survey and an Urban Institute study.

- Concentration of rehabilitation and combined sewer overflow needs - These are particularly great in Baltimore, New York City, and other older Northeastern and Midwestern cities.
- Concentration of needs in financially distressed areas - Infrastructure needs are most apparent in cities least able to afford improvements.
- Reliance of large cities on Federal aid -- To the extent that Federal funding does not keep pace with local expenditures, large cities will have major difficulties in financing sewage treatment systems.

ICE AND LOCAL FINANCIAL CAPABILITY

If the increased local share of construction costs from ICE can be passed directly to industry, the long-term direct costs impacts of ICE to communities should be minor. Three conditions that might lead to increased costs for local communities and their potential impacts are:

1. Industry construction cost subsidized by the local community - Impacts are an inability to borrow funds and high debt service costs.
2. Industry self-treatment - Impact may be loss of economy of scale, but avoidance of other costs.
3. Industry shuts down or decreases production - Impacts are loss of jobs and a decline in the tax base.

OTHER ISSUES

In addition to the potential economic effects of ICE on local communities, several other issues were raised by communities in their responses to EPA. To provide a comprehensive view of community concerns, these considerations are presented as follows:

Issue 1. Inequities Between Communities

One concern is that application of deadlines for industrial flow eligibility would establish inequities between those facilities able to offer low-cost treatment and those that could not. This was a particular concern for those communities who believed that they were missing the deadline because of slow State or EPA processing of facility plan approvals.

Another concern, involving the 50,000 gallons per day cut-off, is that a community with many small industries, all with flows under 50,000 gallons, could receive funding for all of its industrial flow, while a community with only one industry, but above the 50,000 gallons limit, could not, even though its flow was smaller.

Issue 2. Retroactivity

Those communities far along in Step 1 planning, but unable to meet the eligibility deadlines, feel it is unfair to be required to revise already completed work. The suggestion was made to revise the cut-off date for eligibility.

Issue 3. Inequities Between Industries

Some communities feel that because of the 50,000 gallons per day limit, they might be forced to charge industrial users widely different rates, when the only difference between them is amount of flow. Others are concerned that some industries would have low rates because of use of previously completed facilities, while newer industries in development areas would face higher rates or self-treatment costs.

INDUSTRIAL PERSPECTIVE

This section, documenting the potential impact of ICE on industry, is based on information contained in the January 1979 Coopers and Lybrand report to Congress and the May 1980 Report to Congress, supplemented by material submitted to EPA by specific industries and their trade associations. Topics covered here include an evaluation of tax laws as they pertain to wastewater treatment costs for industries, the feasibility of alternative approaches for funding industrial treatment plants, and funding sources available to industries.

Compliance with industrial wastewater treatment requirements can be achieved by industries in two ways: self-treatment or use of a publicly owned treatment works (POTW). The decision on which type of facility to use is based on three kinds of factors: direct economic, indirect economic, and non-economic. Evaluations of each follow.

Direct Economic Factors

There are six basic wastewater treatment options available to industries discharging process wastewater. These alternatives are summarized below.

1. Self-treatment - Industry would use its own capital to plan, construct, and operate its facility.

2. Jointly owned POTW - Industry would jointly finance and thus own part of the plant, but the municipality would manage it. The portion owned and financed by industry would be proportionate to each user's share of the POTW's design flow and pollutant loading.

3. Jointly financed POTW - Industry would contribute to construction and maintenance of the POTW without the responsibility of ownership. The portion financed by industry would be proportionate to each user's share of the POTW's design flow and pollutant loading.

4. Binding contract - The municipality would own, operate, and finance a POTW, and industry would pay its share under the equivalent of a long-term lease, even if industry reduced or eliminated its use of the POTW.

5. Non-binding contract - Similar to ICR, an industry would pay only for actual use of a POTW owned and financed by the municipality. However, this option differs from ICR in that payments by industry would be 100 percent (rather than 75 percent) of construction costs for treatment of industrial process waste, would include an interest component, and all funds collected would be retained by the municipality.

6. Treatment in a POTW with debt service based on ad valorem taxes - No direct industrial payment. Municipalities would sell bonds, with all users paying additional ad valorem taxes on the 75 percent industrial share of construction costs formerly paid by EPA grant assistance.

The choice of Options 2 through 6 is not that of the industrial discharger alone, as the municipality must agree to the industry's choice. In addition, for Options 4 through 6, the municipality must also be able to sell bonds in order to raise the necessary capital.

In analyzing the direct economic factors associated with each wastewater treatment option, the most basic comparison is the total cost of each option. The initial and annual cost components for each option are summarized in the text.

To some extent, the initial costs to industries under Options 1 and 2 can be offset by two Federal tax incentives for pollution control investments, both of which are mandated by the Internal Revenue Code. One of these concerns an exception to the restrictions placed by Congress in 1968 on the use of industrial development bonds (IDBs) issued by State or local governments to finance privately owned industrial plants, the interest on which is tax exempt. This exception was for investment in pollution control facilities, thereby allowing an incentive to industrial dischargers of the investment tax credit, depreciation deductions, and an interest saving of 30 to 35 percent.

The second tax incentive, enacted in 1969 and amended in 1975 and 1978, provides for the amortization over five years of pollution control facilities installed in industrial plants in existence on December 31, 1975, while still allowing qualification for the full 10 percent investment tax credit.

This analysis suggests that it may be more economical for some large industrial dischargers to self-treat in accordance with Best Available Technology guidelines, rather than to discharge to a POTW under proposed Pretreatment Standards. However, for most small industrial dischargers it may be more economical to use a POTW. The breakeven size ranges from 25-150 thousand gallons per day depending upon the size of the POTW and the industrial cost sharing agreement between the POTW and the industrial discharger.

In the present study, the difficulty is recognized of quantitatively evaluating the relative costs for the six wastewater treatment options on a national basis, since each industry operates with a unique combination of physical and economic circumstances. In addition, there is reluctance on the part of industrial dischargers to reveal detailed data on the financial impact of ICE to their operations because of employee morale and productivity issues, competitive practices by competitors, and public image considerations. However, the evaluation of costs on a nationwide basis, using data for the textile industry, is included and can be used for evaluating the relative cost of each option, for various sizes of POTWs and various industrial discharge volumes.

Indirect Economic Factors

In addition to the direct costs associated with the construction and operation of a self-treatment facility or the use of a POTW, the choice by an industry of a treatment option will result in other incurred costs. Although such costs are even more difficult to quantify than direct costs, they generally tend to make use of a POTW more attractive compared to self-treatment than it might otherwise be.

One potential indirect economic pressure is the chance of a partial or complete shutdown of the industry operation in the event of a treatment facility malfunction. This would occur as a result of any wastewater processing problem since an industry which self-treats is fully responsible for the quality of its discharge.

A second indirect economic consideration is an unfavorable debt-to-equity ratio caused by the debt required to finance construction of treatment facilities. This situation may lower the attractiveness of the industry's stocks and bonds to investors and would require higher dividends and interest rates to sell future new issues.

A third aspect of the choice to self-treat by an industry concerns the necessary diversion of management attention and engineering expertise away from direct corporate operations to the planning, construction, maintenance, and operation of pollution control wastewater treatment facilities. This stretching of personnel expertise and time to include wastewater treatment lessens their availability for focusing on corporate profits.

To the extent that pretreatment would be required of an industry choosing to use a POTW, the distinction between self-treatment and POTW use may be lessened or eliminated in terms of indirect economic factors.

Non-economic Factors

There are several factors, not economic in nature, that have significant impact on the decision by an industry whether to self-treat or use a POTW. Location of the industrial plant is the most important factor. If it is currently discharging into a POTW, it is unlikely that self-treatment would be a viable option. First, it would be considered a new source, since it is not currently discharging direct. Federal and State permits for new direct discharges are difficult to obtain for new dischargers. Second, communities are reluctant to zone land for wastewater treatment purposes. Also, in order to self-treat, adequate land and waterways for the construction of a self-contained water treatment system must be available within reasonable distance of the industrial plant. An additional requirement is that the waterway must be able to accept the waste discharge of the industry without resulting in water quality deterioration; or adequate land for spray- or furrow-irrigation, without run-off, must be available. If these conditions cannot be met, an industry will be forced to use a POTW, regardless of cost.

Similarly, a POTW with a capacity to treat the industrial wastewater must be located within reasonable distance of the industrial facility. If this condition cannot be met, an industry will be forced to self-treat, regardless of cost.

As few industrial plants meet all prerequisites for both alternatives to wastewater management, the choice between self-treatment and use of a POTW will be based on the unique combination of all factors pertaining to each discharger. In addition to the considerations previously described, attention must also be given to those such as recruiting and training of plant operators; sludge disposal; compliance with water pollution control, solid waste, clean air, and safe drinking water regulations, including permit and monitoring requirements; and commitment of financial, legal, and engineering resources.

CASE STUDIES (OPINIONS OF COMMUNITY AND INDUSTRY LEADERS)

It was not considered practical to conduct a full-scale survey of all communities potentially affected by ICE under the time constraints of this study. Therefore, to assess the perceptions, opinions, and decisions of community and industry leaders concerning the effects of ICE, a qualitative rather than a quantitative approach was taken. Specifically, a focus group interview technique was used in three communities selected by geographical location (East, Midwest, and West) and amount of industry located within the immediate areas. Seven group interviews were held with various combinations of industry representatives and municipal officials from the three communities. In discussing ICE and its potential effects, several topics were covered:

- Understanding of ICE;
- Municipal response to ICE;
- Extent of impact on industry;
- Options available to industry and municipalities;
- Probability of self-treatment by industry; and
- Possibility of industry closing.

The interviews indicate that the following perceptions are evident in the three communities which participated in the case studies. These statements shall be viewed as the perceptions of significant members of the community as opposed to a factual description of actual conditions. These perceptions cannot be generalized to all communities potentially impacted by ICE.

1. ICE has create an impasse in the minds of community and industry leaders.

The feeling is that local government is expected to collect cost revenues from industry, but that industry is not able to pay. The industry position is that ICE is financially impossible to undertake, and is viewed as a barrier to further progress.

2. ICE tends to be regarded as a capital commitment, making the impasse between industry and the community worse.

Industry regards ICE as an expenditure for an unproductive asset, thus raising concern about the return on the investment and indebtedness. In addition, industry notes its lack of control over, or equity in, this type of facility, the result being a reluctance to spend stockholders' money on municipal issues that provide no return.

3. If ICE could be considered an expense item, it would be evaluated on an ongoing basis.

Except in Milwaukee, industry does not see ICE as an operating expense, but as a capital commitment. However, this could change, and industry could find ways to reduce costs. At present, industry still feels unable to pay for ICE.

4. Self-treatment is not considered a viable option, although pretreatment to offset increased rates would be viable.

Self-treatment is viewed by industry as technically but not economically feasible. In many cases, land is not available for this purpose. In addition, there are too many uncertainties associated with self-treatment and no guarantees of success. However, pretreatment is possible, and may be essential in spite of concern over the fixed costs of a municipal facility.

5. Local government is perceived to be in a bind with almost no options.

Local governments feel that the burden of finding a solution to the ICE impasse has been left to them. Only Milwaukee sees any hope of financing such a burden; proposition 13 in California prohibits any bond issues without two-thirds of the registered voters. Local reaction has been to proceed as if ICE were not a factor.

6. Political action to repeal ICE is considered the best course, at present.

The feeling is to revert back to the position existing before ICE, in which availability of Federal and State funds required that a city absorb only 12-1/2 percent of the total cost of facility construction.

7. Industry closings are a distinct possibility if ICE is implemented.

Small firms could be forced to go out of business, while larger firms would shift production to other plants. There would also be a domino effect such that remaining business would bear a greater burden of the ICE cost; this would result in economic disaster.

8. Implementation would involve a long, drawn-out process.

Due to negotiations and litigations that would cause enforcement delays, ICE would stop progress on existing plans, and would lessen cooperation between community and industry by forcing an adversary relationship. A possible positive effect would be a forced reexamination of existing programs which may be overdesigned and which do not consider less expensive facilities possible without government funding and the attendant regulations.

9. Resistance to ICE is increased by the general perception that it is inherently unfair.

ICE is seen as arbitrary and poorly conceived, especially concerning the 50,000 gallons limit and the cut-off date of November 15, 1980, for receipt of grants, and is believed to promote unfair competitive advantages among firms. Those firms already funded do not have to repay grant money if ICE is implemented. There is also doubt about benefit to the environment, i.e., cost-benefit logic, with ICE.

In summary, ICE has described the decision process over wastewater treatment.

- ICE has created an impasse rather than an impetus for progress.
- Efforts have been redirected from existing plans to political action.
- Cooperation between industry and community has been strained.
- There has been a perceived narrowing of options and a tendency to a "wait and see" attitude.

FUNDING ALTERNATIVES

The purpose of this section is to respond to the request of Congress to include in the ICE report a consideration of the appropriate degree of Federal and non-Federal participation in the funding of publicly owned treatment works. In dealing with this request, EPA has developed a series of possible alternatives which are intended to reflect the concerns of the many parties involved in this issue. The list of alternatives is not intended to be exhaustive or exclusive. The absence of an alternative from this list does not mean that EPA would view it with disfavor. Furthermore, the list does not indicate a preference for any particular action, but is intended to present a range of possible alternatives, along with their probable impacts. It should also be noted that this list is limited to consideration of alternatives in the context of current project category eligibilities and a 75 percent Federal share. Changes in eligibility or Federal share are not addressed.

The alternatives to ICE are identified below and briefly characterized. They are grouped according to those which would retain ICE but modify its provisions and those which would replace ICE with different requirements.

1. Retain ICE but do not apply it to any Step 3 project which is the result of a Step 1 project to plan a wastewater treatment facility when the grantee received Step 1 approval before a specified date.

Potential effects of delays in implementation of ICE include costs of replanning and ensuring more time to communities to adjust to ICE impacts.

2. Retain ICE but modify Section 213 of the Water Pollution Control Act to provide loan guarantees to municipalities for that portion of a POTW constructed to serve industrial users, with an interest rate not exceeding the Dow-Jones municipal average rate. The municipal requirement to implement a local capital recovery system would be based on letters of intent from major industrial users.

Potential effects involve ensuring the construction of POTWs where the per capita cost impact of the industrial cost exclusion is great, and that local costs are borne by industrial users.

3. Retain ICE but increase Federal assistance to industrial users of POTWs from other agencies that deal with industrial development (Department of Commerce, Small Business Administration).

Potential effects concern the focus of financial aid onto individual industrial users needing capital for POTW participation, thereby lessening Federal costs of across-the-board industrial funding, but increasing administrative costs due to involvement of additional Federal agencies and case-by-case implementation of guidelines.

4. Retain ICE but provide that POTW capacity for treatment of waste discharged by industrial users be funded by industrial users with no financial assistance from grantee.

Potential effects concern prevention of subsidizing industrial use of a POTW by municipalities at the expense of residential and commercial users. The concept of "proportionality" would be expanded here to cover capital costs.

5. Retain ICE but decrease or eliminate the current tax incentives for pollution control investment (five-year amortization and use of industrial development bonds).

Potential effects concern increases in the cost of self-treatment, making it comparable to joint treatment under ICE; elimination of economic disadvantage to those unable to self-treat because of location; and increases in tax revenues to the Federal government.

6. Repeal ICE so that industrial capacity of a POTW could be funded but do not reinstate ICR.

Potential effects concern funding of industrial flow on the same basis as waste from commercial and domestic sources, increasing Federal costs via grant funds but partially offsetting these by increasing corporate income tax revenues from greater earnings possible from elimination of ICE and ICR expenses, shifting of the cost balance in favor of joint treatment for some industries, and avoiding administrative complexity of ICE.

7. Replace ICE with the requirement that all POTW users make debt service payments proportionate to their use of a POTW (70 percent of grantees already comply with this provision).

Potential effects concern funding industrial waste on the same basis as commercial and domestic, ensuring proportionality in debt service charges as well as user charge rates, and requiring 30 percent of grantees to develop new debt service charge systems, thereby altering their present methods of financing the local share of POTW construction costs.

8. Replace ICE with the requirement that all industrial users of a Federally assisted POTW pay a uniform charge for process wastewater discharged with all collections, audits, and enforcements performed by the Treasury Department and all revenues going to the Treasury Department. The user rate would be set as necessary to recover, nationwide, the same amount recovered by ICR (estimated $60 million per year).

Potential effects involve equalization of user costs and capital share costs, recovery of a portion of Federal funding for treatment of industrial wastewater, a less costly recovery mechanism than ICE or ICR, and placement of a recovery program in the logical agency to administer revenue programs.

9. Repeal ICE and modify the user charge proportionality requirement to allow grantees to charge higher rates to large-volume users.

Potential effects concern funding industrial flow on the same basis as commercial and domestic but giving grantees flexibility in the development of user charge systems, and encouraging water conservation through higher rates for large-volume use.

10. Replace ICE with the requirement that each grantee develop and implement a long-term financial plan for reconstruction and expansion of existing or proposed wastewater treatment facilities. This would apply to all new grants and to previous grants where grantees wish exemption from the requirement of proportionate recovery of local capital costs under P.L. 84-660.

Potential effects involve funding of industrial flow on the same basis as commercial and domestic, fostering complete local self-sufficiency for future POTWs, ensuring enough lead time for grantees to make arrangements for raising capital costs for reconstruction and expansion, eliminating administrative ICE costs but incurring administrative costs of reviewing long-term financial plans, and lessening future construction expenditures through the encouragement of water conservation measures.

National Summary
(Excluding Missouri and Nebraska)

I. Short Term Effect (From State Reported Data)

Number of communities affected 402

Communities	Number of Communities	Population	Industrial Portion
0 - 3,500	56(13.9%)	120,300(.3%)	47,441,000(3.6%)
3,600 - 10,000	71(17.7%)	487,700(1.3%)	66,867,000(5.1%)
10,100 - 50,000	156(38.8%)	3,747,000(9.6%)	291,113,000(22.3%)
50,100 - 100,000	50(12.4%)	3,550,000(9.1%)	118,093,000(9.0%)
100,100 - 500,000	51(12.7%)	11,096,000(28.6%)	421,042,000(32.2%)
500,100 - 1,000,000	14(3.5%)	9,537,900(24.5%)	300,837,000(23.0%)
over - 1,000,000	4(1.0%)	10,340,100(26.6%)	62,422,000(4.8%)
Total Affected	402 100.0%	38,879,000 100.0%	1,307,415,000 100.0%

Communities that exceed specified unemployment rate (National rate = 7.1%)

+	Exceed State rate yet below National rate	37
++	Exceed National rate	123
+++	Exceed State rate which exceeds National	61

POTW flow affected	7,919.8 Million Gallons per Day	
Industrial flow	1,254.3 Million Gallons per Day	15.8% of POTW flow

POTW construction cost affected	$8,158.9 Millions	
Industrial portion	$1,307.4 Millions	16% of POTW cost

Average industrial cost	$ 3.25 Millions per community
Average industrial cost	$33.63 per person
Average industrial cost	$92.48 per household

II. Long Term Effect (From EPA Needs Survey)

Total needed facilities with substantial industrial flow 1,382
Needed facilities serving less than 10,000 population 764 55% of total
POTW construction cost $16.338 billions
Industrial portion $3.538 billions 22% of POTW cost

ESTIMATE OF PERCENTAGES TO BE AFFECTED

402 Communities were reported by States as being affected:
83% of those reporting were from communities of less than 100,000
70% of those reporting were from communities of less than 50,000
32% of those reporting were from communities of less than 10,000

38,879,000 Total population affected as reported
20% of those reporting were from communities of less than 100,000
11% of those reporting were from communities of less than 50,000
2% of those reporting were from communities of less than 10,000

$1,307,444,000 Total industrial cost as reported
38% of those reporting were from communities of less than 100,000
31% of those reporting were from communities of less than 50,000
9% of those reporting were from communities of less than 10,000

32% of reported affected industrial users are in communities of less than 100,000
38% of reported affected POTW costs are in communities of less than 100,000
27% of reported affected POTW flows are in communities of less than 100,000
34% of reported affected IND flows are in communities of less than 100,000

THE MAJOR INDUSTRIAL GROUPS AFFECTED BY THE INDUSTRIAL COST EXCLUSION
(Based upon State reported data)

	Major Industrial Group	Amount	% of Total
1)	Food and Kindred Products	549,000,000	42
2)	Fabricate Metal Products	183,000,000	14
3)	Chemical and Allied Products	130,700,000	10
4)	Electrical and Electronic Equipment	117,700,000	9
5)	Transportation Equipment	104,600,000	8
6)	Textile Mill Products	65,400,000	5
7)	Paper and Allied Products	52,300,000	4
8)	Machinery except Electrical	39,200,000	3
9)	Primary Metal Industries	26,100,000	2
10)	Leather and Leather Products	13,100,000	1
11)	Rubber and Plastic	13,100,000	1
12)	Petroleum and Coal Products	13,100,000	1
		1,307,400,000	100

INDUSTRIAL COST EXCLUSION (ICE)
ESTIMATE OF NATIONAL EFFECT

When statistical data are taken from a large population, observed behavior becomes more uniform and sample observations more accurately reflect the true population.

For this report, the percentage of cumulative construction grant allotments for each State represents an accurate estimate of the relative level of other populations, i.e., percentage of industrial establishments and percentage of human population. It follows that the cumulative allotment percentage indicates the percentage effect of the Industrial Cost Exclusion, since there is a correlation between percentage of allotments, census population, and industrial establishments. There would also be a logical relationship between percentage of cumulative allotments, industrial/municipal wastewater flow, and the grant funds to be excluded due to major industrial users.

Correlation

	*1980 Population	*No. Industrial Establishments	**Cumulative Allotments
Penna.	11.866×10^6	18,735	$\$1,562.7 \times 10^6$
Nation	226.5×10^6	359,928	$31,580 \times 10^6$
%	5.2	5.2	***4.59

*Bureau of Census **Clean Water Fact Sheet Dec. 1980

***If 4.95 percent were adjusted upward for Talmadge/Nunn, it would approach 5.2 percent.

If one State out of fifty correlates this well, then a region or the Nation may correlate equally well. In the EPA's Region III, a survey indicated that $54.8 million per year of industrial funding would be excluded if one assumes an appropriation of $500 million per year for the region. This suggests a national industrial cost exclusion of $430 million at an assumed one-year national appropriation of $3.925 billion. Put another way, 10.955 percent of any appropriation would be excluded.

Conclusion

Estimated Size of Industrial Cost Exclusion

Annual Appropriation	Nationwide Industrial Cost Exclusion
$2.3 billion	$253 million
$2.4	$264
$2.5	$275
$3.3	$363
$3.4	$374
$3.5	$385

I. MUNICIPAL PERSPECTIVE

The effect of the Industrial Cost Exclusion on the construction of publicly owned treatment works.

I. MUNICIPAL PERSPECTIVE

INTRODUCTION

Federally mandated wastewater treatment requirements have major financial impacts on local communities. To achieve and maintain compliance with sewage discharge requirements, a community must raise sufficient funds for the local share of capital costs, as well as money for operation and maintenance (O&M). In addition, there is growing concern that many local communities will not have adequate resources to meet the long-range financial demands for expansion and major capital replacement.

This chapter discusses the potential effect on the construction of publicly owned treatment works (POTWs) of the repeal of Industrial Cost Recovery (ICR) and the enactment of Industrial Cost Exclusion (ICE).

The first section of the chapter deals with the financial impacts expected from the loss of ICR revenues. The next section focuses on short-term effects of Industrial Cost Exclusion, including expected reductions in Federal funding and costs of delay and administration. The third section discusses options available to local communities in responding to Industrial Cost Exclusion. The fourth section deals with potential long-range effects of ICE on economic self-sufficiency for POTWs, and identifies a basic problem for communities: increasing sewerage costs in a time of increasing pressures on municipal finances. Direct and indirect costs to municipalities due to ICE are examined. The final section reviews other issues raised by municipalities, such as retroactivity and equity.

IMPACT OF ICR REPEAL ON MUNICIPAL ECONOMIC SELF-SUFFICIENCY

Section 204(b)(3), repealed by Public Law 96-483, of the Clean Water Act had made clear that one of the primary purposes of the Industrial Cost Recovery requirement is to promote POTW self-sufficiency by generating revenue for the "expansion and reconstruction" of POTWs. This section summarizes information regarding the potential effect of the repeal of ICR on the ability of POTWs to pay for future replacement and expansion costs. This information is based upon:

- o Previous reports to Congress by the Environmental Protection Agency (EPA) regarding Industrial Cost Recovery,
- o Estimates of potential ICR revenues as a portion of POTW costs, and
- o Responses from municipalities.

The EPA's "Report to Congress, Industrial Cost Recovery" was submitted to Congress on January 25, 1979. This report, prepared by Coopers and Lybrand under contract to EPA, concluded that ICR revenues "would not have any significant contribution toward the grantee's financial capability to meet the cost (when adjusted for inflation in the ensuing recovery period) for future expansion and upgrading of the wastewater treatment works."

Two major findings support this conclusion. First, the ICR revenues are modest for the average grantee in terms of the overall sewage treatment budget. In the communities studied by Coopers and Lybrand, the average total cost per grantee was $6 million per year (including O&M and debt service), while average ICR revenues to be retained by the grantee for future expansion and upgrading were $40 thousand per year. For the average grantee, this portion represents less than one percent of the annual total sewerage costs. Second, since ICR revenues remain constant, their importance to local sewerage needs decreases as costs of administration and future construction increase due to inflation. According to Coopers and Lybrand, for the average grantee, administrative costs would overtake local ICR revenues long before the industrial share was paid back.

In a supplementary report to Congress in May 1980, EPA concluded that for some grantees ICR revenues could provide "a significant supplemental fund for treatment system improvements." According to this view, a primary benefit of ICR requirements is that 80 percent of the local ICR revenues are dedicated, that is, they must be held and used for treatment system improvements. Unlike user charge revenues, 80 percent of the ICR revenues cannot be transferred into general revenue accounts. As a source of dedicated reserve funds, ICR revenues provide a step in the direction of economic self-sufficiency for local treatment systems. For most communities, however, the revenues will not have a significant effect.

From a national perspective, potential ICR revenues are small in comparison with overall public sewerage costs. In the 1979 ICR report, Coopers and Lybrand estimated that total ICR revenues to be collected would average $60 million per year when all POTWs which could be constructed by funds authorized under P.L. 92-500 and P.L. 95-217 are in place. Total ICR revenues retained by all the grantees would average $24 million per year. In contrast, capital expenditures for public sewerage in 1978 exceeded $6 billion (including Federal, State, and local expenditures), with debt service and operations and maintenance costs adding approximately $4 billion more to the total. Thus, ICR revenues represent less than one quarter of one percent of current annual spending for POTWs.

Responses from municipalities to the Federal Register notice on the industrial user study suggest that ICR revenues are not a major factor for most local communities. Responses were received from more than 60 States, municipalities, sewer districts, and planning agencies. The majority of these letters were vocal in their opposition to the exclusion of funding for industrial flow from large water users. Many of the responses from municipalities indicated that the new legislation would result in financial hardship due to fewer Federal funds, and four responses indicated preference for the old ICR system over the current legislation. Not a single respondent, however, indicated that loss of ICR revenues would create financial hardship or make local economic self-sufficiency more difficult. This indicates that few municipalities regard the loss of potential ICR revenues as significant.

SHORT-TERM EFFECTS OF THE INDUSTRIAL COST EXCLUSION UPON THE CONSTRUCTION OF POTWs

OVERVIEW

This section estimates the possible short-term effects of the Industrial Cost Exclusion upon municipal decisions to build POTWs. Another section discusses possible long-term effects of ICE.

The short-term effects of the Industrial Cost Exclusion concern (1) possible savings to EPA from not funding major industrial capacity in POTWs and (2) allocation of the cost of that industrial capacity among the citizens and industries in affected communities.

The communities of interest are those well into the Step 1 planning phase which are able to define the cost of their plants and the industrial portion affected by ICE--roughly those communities which would have begun construction between 1982 and 1985.

Briefly, ICE decreases Federal funding for constructing POTWs. It requires communities with major industries to seek alternative financing for the capacity assigned to industrial users having flows greater than 50,000 gallons per day (gpd) of equivalent sanitary waste. The word "affected" in the rest of this section describes both an industry with such a flow, and the community in which it is located.

Data from 48 States and 7 territories concerning affected industries and communities form the base for this analysis. A fuller description of the data appears in the general discussion.

In general, the effects of ICE upon EPA and upon affected communities are the following:

(1) From the point of view of EPA, the savings in the short term from ICE available to the Construction Grants Program are limited by delays in projects that ICE itself will cause. Some delays due to ICE are inevitable, and Federal law allows construction grant dollars to be used only to build POTWs. Current projections of the construction index for sewage treatment plants suggest that a delay of projects for little more than two years eliminates any savings to EPA from ICE.

(2) From the point of view of affected communities, ICE imposes real costs, not only upon POTW projects, but also upon the profitability and sometimes viability of local industries. As a matter of definition, it is misleading to characterize affected industrial users as generally large and highly profitable. Rather, affected industries use large volumes of water in their operations, with the profits of a particular user depending upon a host of business variables, such as the efficiency of its plant, the nature of demand, and the competitiveness of its market.

(3) Communities that have already built POTWs have a competitive advantage over communities affected by ICE. P.L. 96-483 repealed ICR as well as instituted ICE. Communities that built POTWs under the program of Industrial Cost Recovery received 75 percent grants for the capital costs of industrial capacity. Industries in these communities no longer have to make ICR payments for their capacity. Such communities will be able to charge lower sewer rates to industries than will most communities affected by ICE.

An examination of the potential costs of ICE to affected communities shows that these costs are not evenly distributed. (Table I-1 suggests the variation in the effects of ICE.) A sense of likely community responses to ICE depends, therefore, upon knowing the range and variation of potential costs.

Consider the following characterizations. Before considering the effects of inflation and interest charges, ICE will make the 25 percent non-Federal share of the capital costs of a POTW into a 26 percent to 50 percent non-Federal share. The average non-Federal share in an affected community will increase to 40 percent. From the point of view of affected communities, that is an average increase of 60 percent in the local share, since (0.40-0.25)/0.25 = 0.60.

Viewed as a one-time capital charge to households, ICE will require less than $1.00 per household in some communities, but more than $10,000 per household in the most extreme case, with the average one-time capital charge per household being $89.

- Forty-five percent of the affected communities would experience an additional one-time capital cost per household of $100 or less in 1980 dollars.
- Eighty percent of the affected communities would experience an additional one-time capital cost per household from ICE of $400 or less in 1980 dollars.

The severity of the potential impact of ICE upon a community depends on the percentage of industrial flow, on the size of the community, and on its relative wealth.

- The largest per household costs due to ICE occur in the smallest communities. Twenty percent of the communities would experience an additional one-time capital cost per household of $400 or more. With seven exceptions, all of these communities have populations of 50,000 or less.
- On average, median household income in nonmetropolitan areas is 20 percent less than median household income in metropolitan areas. Thus, a one-time capital charge of $100 has a greater impact in a small community than in a metropolis.

TABLE I-1. MUNICIPAL PERSPECTIVE

Community	Population	Percent Industrial Flow	Project Cost	Non-Federal Share	Non-Federal Share per Household*	Industry Portion Affected by ICE	Percent Increase in Non-Federal Share	ICE Cost per Household	Percent Increase in Capital Costs per Household from ICE
Los Angeles County, CA	3,500,000	16	$75M	$19M	$15	$12M	63	$7	47
Los Angeles, CA	3,000,000	2	$200M	$50M	$46	$ 7M	14	$9	20
Phoenix, AZ	919,000	5	$66M	$16.5M	$49	$5.2M	32	$16	32
Duluth, MN	110,000	44	$ 4M	$ 1M	$25	$2M	200	$50	200
Boise, ID	100,000	1	$20M	$ 5M	$138	$0.2M	4	$6	4
Frederick, MD	30,000	5	$13M	$3.3M	$298	$0.7M	21	$64	22
Pepper's Ferry, VA	30,000	20	$17M	$4M	$390	$3M	70	$303	77
Martinsburg, WV	15,000	7	$ 3M	$0.8M	$69	$0.2M	25	$37	54
Salina, UT	2,000	40	$ 2M	$0.5M	$688	$0.1M	20	$138	20

*The U.S. Census reported an average of 2.75 persons per household for March 1980.

As stated earlier, ICE will impose inevitable delays on the projects it affects. These delays will occur because communities will have to explore financing alternatives for the affected industrial capacity, negotiate new agreements with participating industries, hold public meetings with their citizens, and perhaps refashion facilities plans.

The effects of delay--inflation, increased borrowing costs, and greater administrative costs--will add to the impact of ICE. The appropriate calculations show that even if the affected industries themselves pay "up-front" sums for their capacity in POTWs, ICE typically will increase the remaining non-Federal share in real terms from 1 percent to 11 percent.[1] If a community as a whole pays for the affected industrial capacity, ICE typically will increase the non-Federal share in real terms from 55 percent to 104 percent.

Faced with these potential effects, communities affected by ICE will consider several possible responses. First, communities with significant industrial flows (defined as 15 percent or more of total flow) will try to scale down the size of their proposed plants. In eliminating some reserve capacity, they will reduce the non-Federal share of the capital cost. Second, they will decide which options are feasible. The main options are listed below.

(1) A community may raise the ICE portion itself, either by a one-time charge upon its citizens or by borrowing a greater sum than it had first planned in the tax-exempt bond market. Here, the community as a whole pays for the industrial capacity excluded from Federal support by P.L. 96-483.

(2) A community may require its participating industries to finance their planned industrial capacity themselves; that is, to provide "up-front" payments to the municipality at the time of construction. Such industries would have to generate these funds internally or borrow them in the capital markets. Apart from the costs of delay, however, the community itself would face no higher debt service or user charges under ICE.

(3) A community may examine ways to share with affected industries the cost of building their POTW capacity. Variations of this option range from increasing the property taxes of all in the community to requiring affected industries to service the debt the community borrows on their behalf.

(4) Industries may choose to treat their wastes themselves and not participate in a POTW. Each will reexamine the economics and feasibility of self-treatment. If sufficient land is available, if community ordinances do not require industrial participation in a POTW, if the corporate planning horizon is long enough, if the

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[1] Calculations based on the current economic assumptions of the Administration suggest a range for the cost of delay of -4 percent (a real savings) to 10 percent (a real cost).

industry can obtain the necessary permits, and if the after-tax costs are less than for joint treatment, an industry will "self-treat."

If the percentage of POTW capacity first planned for such industries is high, residents and commercial establishments remaining in the POTW may face higher unit costs for user charges after ICE than before because of fewer economies of scale. On the other hand, some communities may then turn to alternate methods of treating waste-water, perhaps lagoons or improved septic systems, and face lower unit costs than before ICE.

(5) A community with a high percentage of industrial flow may form a nonprofit, "public benefit" corporation jointly owned by city and industries. Such a corporation will forego any EPA assistance, but may save money by avoiding some Federal and State requirements.

(6) A community may decide to postpone indefinitely building a sewage treatment plant. A community with a large proportion of industrial capacity but whose industries are marginal may decide that neither its citizens nor its industries can shoulder the increased burden.

Of the options outlined, those that a community will entertain seriously depend on factors such as:

(1) The financial burden of the previously planned local share,

(2) The incremental size of ICE,

(3) The community's general financial condition,

(4) The cost and availability of capital,

(5) Competing needs for municipal funds,

(6) The strength of its local industries, and

(7) Benefits which the community sees as arising from compliance with the Clean Water Act.

In dealing with these factors, a community may take an approach which tries to minimize costs to its citizens and damage to its economic base. Such an approach appears practical for 46 percent of affected communities for which one-time capital charges per household are $100 or less. It may also be feasible for the next 34 percent of communities whose one-time costs per household range from $101 to $400. Thus 80 percent of affected communities may find a way to share the costs of ICE with affected industries. As part of this approach, a community would examine the feasibility of the combination of industrial self-treatment and residential alternate treatment. If industrial participation and secondary treatment are necessary, the community would strike a balance between assessing affected industries and charging residents. The community would both borrow a larger sum in the municipal bond market and charge its taxpayers a small, one-time fee. It would both require some "up-front" money from affected industries and arrange annual surcharges for a portion of the additional debt service. In so doing, it would try to protect its bond rating and prevent the loss of jobs in the community.

Not all affected communities, however, will have the financial leeway to devise such an approach. Those that cannot are likely to be small and poor with marginal industries. Such communities may need counsel and assistance if they are to meet the requirements of the Clean Water Act.

In sum, ICE-induced delays of projects in the short term will probably eliminate most savings EPA would gain from not funding the industrial capacity of large water users. What savings do occur will impose additional real costs upon those communities whose facilities plans are well defined. Without knowing the financial condition or the competing demands for funds in affected communities, EPA can only suggest those categories of communities which may be able to absorb the increased costs. Those whose one-time capital charges per household due to ICE are $100 or less may be able to afford the increases. Others can be judged only case by case. The main section of this chapter shows distributions of the costs of ICE among population categories, names communities whose one-time capital charges per household due to ICE exceed $400, and reports projected effects of inflation and increased interest charges.

GENERAL DISCUSSION

The Industrial Cost Exclusion contained in P.L. 96-483 reduces Federal funding for POTWs. It changes the Clean Water Act to prohibit the use of Federal funds to build capacity in POTWs for industrial users whose flow exceeds 50,000 gallons per day of equivalent sanitary waste. The law, however, specifically exempts from ICE those communities which meet one of the two conditions below:

(1) Award of a Step 2 design grant before May 15, 1980;

(2) Award of a Step 3 construction grant before November 16, 1981.

Thus, communities affected by ICE are (1) all future grantees, (2) grantees that have just begun the Step 1 planning process, (3) Step 1 grantees that have defined their POTW plans and identified industrial participants, and (4) those Step 1 grantees that have completed their facilities plans and are awaiting EPA's approval. For the purpose of assessing the short-term effects of ICE upon the construction of POTWs, the communities of interest are (1) those well into the Step 1 planning phase that are able to define the cost of their proposed plants and the industrial portion affected by ICE and (2) those Step 1 grantees whose plans are done but have not received a Step 2 grant. The word "affected" refers to both an industry with a flow greater than 50,000 gallons per day of equivalent sanitary waste and the community in which it is located. "Short-term" is an approximate phrase meaning the five years between now and 1985.

The short-term effects of ICE concern (1) possible savings to EPA from not funding major industrial capacity in POTWs and (2) the allocation of the cost of that industrial capacity among the citizens and industries in affected communities. The following pages (a) discuss the savings available to EPA from ICE, (b) discuss the variation in the impact of ICE upon communities, (c) report present value calculations (contained in the technical section) of the cost of ICE to communities, and (d) discuss possible options and likely responses by communities to ICE.

To provide data for this analysis, 48 States[2] and 7 territories reported information about 401 communities that will be affected by ICE in the short term. They reported each affected community's population, the size of its proposed plant, the total cost of the proposed POTW, the types of affected industries, the amount of affected industrial flow, the cost of the industrial portion affected by ICE, and the unemployment rate. Section V, the "National Effect," conveys this information for each of the 55 States and territories that reported to EPA and provides a national summary. These 401 communities should reasonably represent the universe of communities subject to ICE in the short term.[3]

To show the general dimensions of ICE, Table I-2 displays some of the national summary data: projects affected by ICE total more than $8 billion, with communities foregoing more than $1 billion in grants. ICE will increase the average non-Federal share by more than 60 percent. If the cost of affected industrial capacity were charged solely to households in a one-time bill sent tomorrow, the average bill per household would be $89.

Possible Federal Savings from ICE

Table I-2 suggests that EPA will save over $1 billion by not funding industrial capacity in POTWs for large water users. Table I-2, however, does not consider the effect of inflation, and, more importantly, does not consider the effect of delay. Any discussion of the savings to EPA resulting from ICE must take into account the delays in projects that ICE will inevitably induce.

ICE will delay projects because communities that had their facilities plans well under way must now explore different ways to finance the EPA grant shortfall, including that of charging industries directly for the entire amount. For their part, industrial firms will want to reconsider their decisions to join POTWs. They will look again at the alternatives of self-treatment, shifting production to other plants, or even closing down in

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[2] The States of Nebraska and Missouri did not submit lists of affected communities.

[3] Section V also lists communities which other sources named as being affected by ICE. However, data from these other sources are often incomplete, and they are not included in this analysis.

TABLE I-2. NATIONAL AVERAGES AND TOTALS FOR DATA THAT 48 STATES AND 7 TERRITORIES REPORTED FOR THE ICE STUDY

(a)	Total number of States and territories reporting to EPA	55
(b)	Total number of communities reported as affected by ICE	401
(c)	Total cost of affected projects in 1980 dollars*	$8,124.5M
(d)	Federal share of affected projects without ICE in 1980 dollars*	$6,093.4M
(e)	Total industrial portion excluded by ICE in 1980 dollars*	$1,243.7M
(f)	Federal share of affected projects with ICE in 1980 dollars*	$4,849.7M
(g)	Average industrial portion per community excluded by ICE	$3.10M
(h)	Average increase in the non-Federal share due to ICE**	61%
(i)	Average cost of ICE per household	$89
(j)	Range of percentage of industrial flow in affected POTWs	1-92%
(k)	Average percentage industrial flow in an affected POTW	15.8%

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*EPA has assumed that the reports that came in January 1981 from 55 States and territories describe project costs and the excluded industrial costs in 1980 dollars.

**For this analysis, EPA has ignored ineligible costs and assumed that the non-Federal share is 25 percent of the total cost of a project.

light of potential ICE costs. The administrative time and money spent by both municipal and corporate officials in exploring treatment and financing possibilities, negotiating new agreements, and possibly revising facilities plans will be significant.

No one knows yet how long ICE will delay projects. Moreover, other factors can delay projects as well. (For example, given particular funding rules, a State may delay projects which are "ready to go" but occupy low positions on its priority list.) Estimates from industry suggest 18 months as a typical delay resulting from ICE; an affected municipality has suggested two years. These estimates give a sense of how much time is required by willing parties to explore financial options and to negotiate agreements. For the purpose of this analysis, EPA will estimate its savings from ICE after project delays of one, two, and three years.

This analysis of delay entails (a) estimating the inflation of construction costs, (b) assuming a year (or years) when POTWs otherwise would have been built, and (c) calculating the difference between what the Federal share would have been without ICE and what it will be with ICE after delays of one, two, and three years. A full analysis would also consider the cost of postponing environmental benefits, but that is beyond the scope of this report.

To estimate the inflation of construction costs, EPA used a sewage treatment plant construction index based on its own data. Using 1980 as the base year, Table I-3 shows that model's predictions. Note that these predictions are not of inflation throughout the economy, but only of inflation in one sector of the economy, a sector in which historically inflation has been relatively high.

TABLE I-3. PREDICTIONS OF A SEWAGE TREATMENT PLANT CONSTRUCTION INDEX BASED UPON EPA's DATA

Fiscal Year	'80	'81	'82	'83	'84	'85	'86
Index	1.00	1.088	1.203	1.335	1.469	1.605	1.748
Percent Change from Preceding Year		8.8	10.6	11.0	10.0	9.3	8.9

Average annual percent change from previous year for 1980-1985 is 9.9 percent.

By using this index and assuming project costs to be reported in 1980 dollars, EPA can illustrate the savings from ICE to the Construction Grants Program. For a first illustration, EPA has assumed that all projects affected in the short term would otherwise have begun construction in 1982. It also has assumed that without ICE all projects would receive 75 percent grants. A one-year delay means that all projects would begin construction in 1983. A two-year delay means that all projects would begin construction in 1984, and so forth. To calculate its savings, EPA has subtracted the Federal share with ICE and after delay from the Federal share without ICE and with no delay. The net savings appear in Table I-4. The technical section of this chapter shows the calculations and presents the rationale for them.

Note that EPA's savings are not $1 billion and, in fact, become negative after little more than two years of delay (about two years and two months). Increased construction costs will outstrip savings. If one-third of the projects were delayed one year, one-third were delayed two years, and one-third were delayed three years, EPA would save $155 million for these 401 projects.

However, not all affected projects would have begun construction in 1982. Many would not have been "ready to go." Others would have occupied low positions on States' priority lists. Moreover, it is realistic to assume the budget for construction grants will at most remain level and will likely decrease in real terms.

Hence, it is more appropriate to report percentage savings to EPA from ICE. Table I-5 shows the percentage savings to the Construction Grants Program after delays of one, two, and three years for projects that would otherwise have begun construction in 1982.

TABLE I-4. CONSTRUCTION GRANT SAVINGS FROM THE INDUSTRIAL COST EXCLUSION AFTER TAKING ACCOUNT OF DELAYS

	1983	1984	1984-1/2	1985
Delay	1 Year	2 Years	2-1/2 Years	3 Years
EPA's Savings	$855 million	$206 million	-$124 million	-$453 million

Assumptions:
(a) Project costs in 1980 dollars of $8,124.5M
(b) ICE affected industrial capacity of $1,243.7M
(c) All affected projects would have begun construction in 1982 without ICE.

As above, for these projects EPA's savings become increased costs in little more than two years. If one-third of the projects "ready to go" in 1982 were delayed one year, one-third were delayed two years, and one-third were delayed three years, savings to the Construction Grants Program would be approximately 4 percent. If, however, projects unaffected by ICE are "ready to go," EPA can fund those projects and offset its losses from delay.

Again, the factors that drive this analysis are increasing construction costs and a budget for the Construction Grants Program that does not increase with inflation. Delays of longer than two years eliminate savings to EPA from ICE.

Costs to Communities from ICE

A serious question concerns the magnitude of the costs that ICE will impose on communities. Table I-2 describes some typical effects of ICE, reporting an average increase of 60 percent in the non-Federal share for the 401 projects. Yet the potential impact of ICE on communities is not uniform. For example, the increase in the non-Federal share in affected communities ranges from 4 percent to 330 percent. This section will show the distribution of affected communities and the variation in potential impact. Then, using a variation of present value analysis to incorporate the effects of inflation and delay, it will estimate increases in real costs under several sets of assumptions. Another section discusses possible responses by communities to these potential costs.

In terms of the numbers of affected projects, ICE affects primarily small towns and small cities. Table I-6 shows the distribution of affected communities by size. Over 70 percent of the affected projects are in communities smaller than 50,000 persons. Thirty-two percent of the affected communities have fewer than 10,000 people. At the same time, communities of 50,000 or less accounted for only 30 percent of the excluded dollars. (See Table I-7.) However, the proportion of small communities (less than 10,000) affected by ICE is less than the percentage of all small communities receiving grants (32 percent versus 66 percent).

A more important question than the proportion of small communities affected by ICE is whether the relative burden of ICE is greater in small communities than in large ones. To characterize the relative burden of ICE on communities, EPA calculated an incremental, one-time cost per household from ICE in each affected community. Table I-8 shows the resulting distribution of one-time ICE costs per household by size of community, using the March 1980 Census figure of 2.75 persons in the average American household.

It is true that the incremental costs per household shown in Table I-6 assume that only householders pay the industrial costs excluded from Federal participation under P.L. 96-483. If communities raised funds for industrial capacity through a one-time increase in ad valorem taxes, the average charge per household due to ICE would be less than the figures here because industries and commercial establishments are part of the cities' tax bases. EPA does not have data by community showing the industrial and commercial portions of assessed value. Nevertheless, the list of household costs by affected community allows one to examine the relative impact of ICE.

The distribution of one-time, 1980 dollar charges per household from ICE illustrates several important points.

- The range of one-time, "up-front" charges per household is large, from less than $1.00 per household to over $10,000 per household.
- More than 45 percent of the affected communities would experience one-time charges of $100 or less.
- The most extreme effects occur in the smallest communities.

Significant burdens per household generally fall upon cities of fewer than 50,000 people, with the most severe burdens per household occurring in communities smaller than 10,000 persons. However, some older cities (7 in this analysis) also bear significant burdens under ICE. EPA chose $400/household as a plausible threshold figure for significant burden. At this point, if a community were to finance the industrial capacity through municipal bonds, additional annual debt service per household for a 30-year

TABLE I-5. PERCENTAGE SAVINGS FROM ICE TO THE CONSTRUCTION GRANTS PROGRAM AFTER DELAYS OF 1-3 YEARS

Delay	1983 1 Year	1984 2 Years	1984-1/2 2-1/2 Years	1985 3 Years
EPA's Savings	12%	13%	-2%	-6%

TABLE I-6. SIZE OF AFFECTED COMMUNITIES--48 STATES

	Population Categories						
	0-3,500	3,600 10,000	10,000 50,000	50,100 100,000	100,100 500,000	500,100 1,000,000	More than 1,000,000
Number of Communities	56	71	155	50	51	14	4
Percentage of Total	14%	18%	39%	12%	13%	3%	1%
Cumulative Percentages	14%	32%	71%	83%	96%	99%	100%

N = 401

TABLE I-7. COST OF AFFECTED INDUSTRIAL CAPACITY BY POPULATION CATEGORIES (1980 DOLLARS, 48 STATES)

	Less than 3,600	3,600 10,000	10,100 50,000	50,100 100,000	100,100 500,000	500,100 1,000,000	More than 1,000,000	Total
Cost of Affected Industrial Portion	$47.4M	$66.9M	$270.5M	$118.1M	$421.0M	$300.4M	$62.4M	$1,287M
Percent of Affected Costs	3.7%	5.2%	21.0%	9.2%	32.7%	23.3%	4.8%	
Cumulative Percent	3.7%	8.9%	29.9%	39.1%	71.8%	95.1%	100%	

TABLE I-8. DISTRIBUTION OF COMMUNITIES BY SIZE AND BY ONE-TIME ICE CHARGES PER HOUSEHOLD IN 1980 DOLLARS (48 STATES)

(Interest charges, inflation, and delay not accounted for)

ICE Costs Per Household (1980 dollars)*	Population Categories								
	0-3,500	3,600 10,000	10,100 50,000	50,100 100,000	100,100 500,000	500,100 1,000,000	More than 1,000,000	Total	Percentage
$ 0-100	6	20	70	36	36	11	4	183	46%
101-200	8	13	45	4	6	2		135	34%
201-300	4	14	6	5	3	0			
301-400	2	7	11	3	2	0			
401-500	3	4	9	2	2	0		52	13%
501-600	4	3	5		0	0			
601-700	2	1	1		1	1			
701-800	0	1	1		0				
801-900	1	2	2		0				
901-1,000	3	3	1		0				
1,001-1,100	1	0	0		0			15	3.7%
1,101-1,200	2	0	0		0				
1,201-1,300	2	1	0		1				
1,301-1,500	2	0	1						
1,501-2,000	4	1	0						
2,001-2,500	3	0	2					13	3%
2,501-3,000	1	1	0						
3,001-3,500	3		1						
3,501-4,000	1								
4,001-4,500	1								

TABLE I-8 (Continued). DISTRIBUTION OF COMMUNITIES BY SIZE AND BY ONE-TIME ICE CHARGES PER HOUSEHOLD IN 1980 DOLLARS (48 STATES)
(Interest charges, inflation, and delay not accounted for)

ICE Costs Per Household (1980 dollars)*	Population Categories								
	0-3,500	3,600 10,000	10,100 50,000	50,100 100,000	100,100 500,000	500,100 1,000,000	More than 1,000,000	Total	Percentage
4,501-5,000	0								
5,001-6,000	1								
6,001-7,000	0							2	.5%
7,001-8,000	0								
8,001-9,000	1								
9,001-10,000	0								
10,001-11,000	0								
11,001-12,000	1							1	.2%
Total (401)	56	71	155	50	51	14	4	401	100.4%

*U.S. Census reports an average of 2.75 persons per household for March 1980.

bond at 11 percent interest would be $46. That would be approximately an added $4 per household per month for 30 years. However, 76 communities under 50,000 people (19 percent of all affected communities) have one-time incremental capital costs per household greater than $400. If such communities financed ICE with 30-year municipal bonds at 11 percent interest, additional monthly charges per household would range from $4 to $105. Table I-9 lists those communities whose one-time incremental costs of ICE per household would exceed $400.

Again, the purpose of showing ICE as a cost per household is not to suggest that communities will require their residents to pay the entire industrial portion affected by ICE. Rather, the intent, in the absence of specific data about the financial condition of most affected communities and the profitability of industrial users, is to capture the magnitude of the financing problems which ICE places before communities. As the Overview suggested, communities may consider several financing options, including that of requiring up-front sums from the affected industries themselves.

One can take this discussion of the relative impact of the Industrial Cost Exclusion upon communities two steps further. The first is to compare the incremental costs of ICE per household to a measure of communities' abilities to absorb these costs. The best measure would be median household income since the household is the unit of analysis here, because median household income implicitly takes account of unemployment rates and, because unlike personal wealth or assessed valuation, it reflects liquid assets. However, figures for median household income from the 1980 Census will not be available until the summer of 1981. The Bureau of Economic Analysis (BEA) has 1978 figures for the per capita income of U.S. counties. These income figures are derived from payroll data and reflect non-cash benefits as well as wages and salaries. On average, they are about 15 percent higher than figures the U.S. Census would report. For each affected community, Table I-17 at the end of this section reports its population, the BEA per capita income of the county surrounding each affected community, and industrial portion per household.

In general, Table I-17 shows that per capita income is lower in counties containing small towns than in counties containing large cities. Hence, even a one-time charge of $100 per household resulting from ICE would have a greater impact in a small community than in a large city. Graphing population against the ratio of the industrial portion per household to per capita income will illustrate the relative impact of ICE in small communities.

The second step one can take in examining the relative impact of ICE in large and small communities is to examine differences in interest rates paid on tax-exempt bonds. In general, small communities tend to have lower bond ratings than large communities or to be unrated.[4] Thus, smaller communities will pay higher interest rates to finance the non-Federal share of their POTWs. The current market for tax-exempt bonds (late February 1981) is

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[4] Cite the Booz, Allen, Hamilton Study.

TABLE I-9. NAMES OF COMMUNITIES WHOSE INDUSTRIAL COST EXCLUSION EXCEEDS $400 PER HOUSEHOLD

ICE Costs Per Household	Population Categories				
	0 - 3,500	3,600 - 10,000	10,100 - 50,000	50,100 - 100,000	100,100 - 500,000
$ 401 - 500	Saginaw, MI Albany, MN Blooming Pr, MN	White Hall, MI M. Butterfield, NJ New Holland, PA Roxboro, NC	Chandler, AZ Billerica, MA Asheboro, NC Morganton, NC Roanoke Rapids, NC Avon Lake, OH Bellefontaine, OH Fremont, OH Ironton, OH Middletown, OH Marshfield, WI	Modesto, CA Decatur, IL	Duluth, MN Camden Co, NJ Chattanooga, TN
$ 501 - 600	Decatur, AR Morton, MS Avon, NY Jay, OK	Berryville, AR Columbia, IN Rouses Pt, NY	E. Chicago, IN Corinth, MS Bellefontaine, OH Warwick, RI		
$ 601 - 700	Almo, AR Heuvelton, NY	Tecumseh, MI	Ithaca, NY		New Bedford, MA Milwaukee, WI
$ 701 - 800		Dequeen, AR	Brenham, TX		
$ 801 - 900	Hudson, MI	Ft. Edwards, NY Seneca Falls, NY	Kankakee, IL Taylorville, IL		
$ 901 - 1,000	Huntsville, AR Dundee, NY Randleman, NC	Monticello, IL Marine City, MI Plymouth, WI	Port Huron, MI		
$1,001 - 1,100	Cedar Spring, MI				

TABLE I-9 (Continued). NAMES OF COMMUNITIES WHOSE INDUSTRIAL COST EXCLUSION EXCEEDS $400 PER HOUSEHOLD

ICE Costs Per Household	Population Categories				
	0 - 3,500	3,600 - 10,000	10,100 - 50,000	50,100 - 100,000	100,100 - 500,000
$1,101 - 1,200	Memphis, MI Perham, MN				
$1,201 - 1,300	Hughson, CA Silver Creek, NY	L. Wissahicken, PA			Middlesex Co, NJ
$1,301 - 1,500	Wilson, NY Westville, OK		Webster, MA		
$1,501 - 2,000	Clinton, AR Murphysboro, AR Corinna, ME E. Greenwich, RI	St. Helens, OR			
$2,001 - 2,500	S. Paris, ME Frazee, MN Pollock, SD		Watsonville, CA Gloversville, NY Beaver Dam, WI		
$2,501 - 3,000	Lincoln, NH	Canastata, NY			
$3,001 - 3,500	Sparta, MI Pelican Rapids, MN Troy, VT		Dalton, GA		
$3,500 - 4,000	Aitkin, MN				
$4,001 - 4,500	Calumet, MI				
$5,001 - 6,000	Cuba, NY				
$8,001 - 9,000	Worthington, NY				
$11,001 - 12,000	Lake George, NY				

"relatively flat," but even so, the Municipal Finance Officers Association (MFOA) reports a 0.625 percent difference between interest rates of recent AA and BBB+ issues. MFOA suggests that when demand for tax-exempt issues increases, the difference between interest rates on the two categories of bonds may grow to 0.875 percent. Moreover, the difference in interest rates for AA and non-rated issues is larger yet. Finally, given even the same bond rating for issues, small communities tend to pay higher interest rates than do cities.[5]

Thus, the combination of higher incremental costs per household, lower personal income, and higher interest rates means that any portion of excluded industrial costs which a community decides to bear as a whole rather than charge to industry will have relatively greater impact in a small community.

Finally, one can attempt to incorporate the findings about economies of scale of sewage treatment plants into this discussion of the relative impact of ICE upon small and large communities. In general, economies of scale exist in conventional secondary sewage treatment plants and appear as lower unit costs for treatment in large POTWs. Total per capita costs (capital plus O&M) for activated sludge plants of 1 MGD (population approximately 10,000) and 0.1 MGD (population approximately 1,000) exceed per capita costs for a 10 MGD plant by factors of 1.6 and 2.6, respectively. Thus, in smaller communities, both residents and industries generally face larger unit costs for conventional treatment.

However, ICE will not affect the unit prices customers already expect to be charged in a community unless the percentage of industrial flow is great, unless the affected industries decide to self-treat, and unless the communities must use conventional treatment. In this situation a community will have an inefficient POTW with higher capital and O&M charges if it does not reduce the size of its treatment plant. And even if such a community scales down its plant, its residents and small industries will face higher unit charges than they expected before ICE.

On the other hand, if industrial flow is a large percentage of total flow to a POTW in a community, if the affected industries decide to self-treat, and if the community can then turn to an alternate method of treating its wastes, perhaps a lagoon or improved septic systems, residents will have lower charges than they would have had with a conventional treatment plant.

The main point to be made about economies of scale in conventional sewage treatment plants, then, is that smaller communities are already paying larger capital and O&M charges per household than cities, and the differential effects of ICE can only add to the disparity. Another point to be made is that some communities with large industrial flows that are affected by ICE may experience increasing capital costs per household and higher unit costs for treatment if their industries decide to self-treat in the wake of ICE.

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[5] Interview with Edwin Wells, President, Bartle Wells Associates, Municipal Financing Consultants, San Francisco, CA, April 1980.

Many affected communities reported unemployment rates that exceed the national average of 7.1 percent. It is difficult to define the effect which an above-average unemployment rate in itself would have on the construction of POTWs. Median household income and per capita income, however, reflect the interaction of the unemployment rate with the ability or willingness of a community to pay for industrial capacity affected by ICE. Nevertheless, for those who are interested, EPA reports in Table I-10 the number of communities with significant unemployment rates: those communities whose unemployment rates exceed the national average of 7.1 percent. Table I-11 shows the distribution of one-time costs of ICE per household for such communities. Table I-12 names those communities whose unemployment rates exceed 7.1 percent and whose one-time costs of ICE per household exceed $400 in 1980 dollars.

A last point is that some States contribute a portion of the non-Federal share of POTW projects. If a State's contribution is a function of size of the Federal share, then ICE will have a relatively greater effect upon projects in that State. The percentage change in a community's local share will be more drastic.

Delay, Inflation, and Interest Charges

Thus far, this report has characterized variations in the effect of ICE on communities in terms of one-time incremental costs per household in 1980 dollars with only limited reference to interest rates and inflation. Inflation, however, increases both the Federal and non-Federal shares of POTW projects. When construction begins, capital costs per household will exceed 1980 figures, and increased interest charges (if not higher rates) will soon follow.

More importantly, insofar as the inflation of construction costs and interest rates exceed the growth of median household income, any delays that occur in a community impose real additional costs upon that community. Inevitable delay from ICE will exacerbate the effects of inflation in communities that would otherwise begin construction of POTWs in 1982. This section discusses these costs of delay and quantifies some of them.

First, delay affects the cost of the entire project, not just that portion affected by Federal funding. As inflation increases the absolute cost of a project, both the Federal share and the non-Federal share increase.

Second, in general, localities must pay greater financing charges on the larger sums they borrow. In some cases, the increased financing charges are simply the previously anticipated interest rate applied to a larger principal. In other cases, the incremental amount borrowed results in a

TABLE I-10. NUMBER AND PERCENTAGE OF COMMUNITIES WITH SIGNIFICANT UNEMPLOYMENT RATES BY POPULATION CATEGORIES

	Population Categories								
Degree of Unemployment	0-3,500	3,600 10,000	10,100 50,000	50,100 100,000	100,100 500,000	500,000 1,000,000	More Than 1,000,000	Marginal Total	Percentage of Communities in Each Category of Unemployment
B.1. No. of communities whose unemployment rate exceeds 7.1%, and whose State's rate is less than 7.1%	11	6	25	2	9	2	1	56	31%
No. of communities with serious unemployment: A.1 Community rate exceeds the national rate of 7.1%, but is less than its State's unemployment rate	6	14	33	11	2	1	0	67	37%
II. No. of communities with extreme unemployment: Communities' rates exceed State's rate, which exceeds the national rate of 7.1%	13	13	17	8	8	1	0	60	33%
COLUMN TOTALS	30	33	75	21	19	4	1	183	101%
Percentage of communities with significant unemployment rates by population category	16%	18%	41%	11%	10%	2%	1%		
Percentage of communities in each population category having significant unemployment	59%(56)	46%(71)	48%(155)	42%(50)	37%(51)	29%*(14)	25%**(4)		

Total number of communities reported as affected by ICE = 401.
Total number of communities with significant unemployment rates = 183.
Percentage of communities affected by ICE that have significant unemployment rates = 46 percent.
*Only 14 communities in this category are affected by ICE.
**Only 4 communities in this category are affected by ICE.

TABLE I-11. DISTRIBUTION OF COST OF INDUSTRIAL COST RECOVERY PER HOUSEHOLD IN COMMUNITIES WITH SIGNIFICANT UNEMPLOYMENT RATES*

Costs of ICE per Household (Principal Only in 1980 Dollars)	No. of Communities Whose Unemployment Rate Exceeds the National Rate of 7.1%, Which Exceeds Their State's Rate						No. of Communities Whose Unemployment Rate Exceeds the National Rate of 7.1%, but Which Is Less Than Their State's Rate						No. of Communities Whose Unemployment Rate Exceeds Their State's Rate, Which Themselves Exceed the National Rate of 7.1%					
Population in thousands	0 3.5	3.6 10.0	10.1 50.0	50.1 100.0	100.1 500.0	500.1 1,000.0	0 3.5	3.6 10.0	10.1 50.0	50.1 100.0	100.1 500.0	500.1 1,000.0	0 3.5	3.6 10.0	10.1 50.0	50.1 100.0	100.1 500.0	500.1 1,000.0
$ 0- 100	1	3	14	1	5	2		6	15	9	1	1	1	2	8	4	6	1
101- 200	2		5		1		2	3	11				1	1	6			
201- 300	1	2						2	1	1			2	2	1	3	2	
301- 400			2		1			2	1		1			1		1		
401- 500	1	1	1	1	1				2	1			1	1				
501- 600			1						2					2	1			
601- 700					1								2	1				
701- 800																		
801- 900									1				1	1				
901- 1,000								1							1			
1,001- 1,100							1											
1,101- 1,200							1											
1,201- 1,300	1												1					
1,301- 1,500	1												1					
1,501- 2,000													1	1				
2,001- 2,500	2		1															
2,501- 3,000														1				
3,001- 3,500	1		1				1											
3,501- 4,000	1																	
4,001- 4,500							1											
4,501- 5,000																		
5,001- 6,000													1					
6,001- 7,000																		
7,001- 8,000																		
8,001- 9,000																		
9,001-10,000																		
10,001-11,000																		
11,001-12,000													1					
TOTAL	11	6	25	2	9	2	6	14	33	11	2	1	13	13	17	8	8	1

TABLE I-12. NAMES OF COMMUNITIES WHOSE EMPLOYMENT RATE EXCEEDS THE NATIONAL RATE OF 7.1%, WHICH EXCEEDS THEIR STATE'S RATE AND WHOSE ICE COST PER HOUSEHOLD IS GREATER THAN $400

Cost Per Household	0-3,500	3,600-10,000	10,100-50,000	50,100-100,000	100,100-500,000
401- 500	Albany, MN	Roxboro, NC	Roanoke Rapids, NC	Modesto, CA	Chattanooga, TN
501- 600			Corinth, MS		
601- 700					New Bedford, MA
701- 800					
801- 900					
901- 1,000					
1,001- 1,100					
1,101- 1,200					
1,201- 1,300	Hughson, CA				
1,301- 1,500	Westville, OK				
1,501- 2,000					
2,001- 2,500	South Paris, ME Frazee, MN		Beaver Dam, WI		
2,501- 3,000					
3,001- 3,500	Troy, VT		Dalton, GA		
3,501- 4,000	Aitkins, MN				
4,001- 4,500					
4,501- 5,000					
5,001- 6,000					
6,001- 7,000					
7,001- 8,000					
8,001- 9,000					
9,001- 10,000					
10,001- 11,000					
11,001- 12,000					

higher interest rate charged on the entire principal. This situation occurs when raters of bonds perceive that a community's ability to repay debt has not kept pace with the inflation of construction costs. (At other times, however, the general level of interest rates shifts, resulting in a different interest rate, higher or lower as the case may be.)

A third cost of delay is the administrative cost of exploring ways to finance the affected industrial portion and of negotiating new agreements with industries. These administrative costs are generally not eligible for EPA grant funding. As stated earlier, industries affected by ICE will reconsider their decisions to join POTWs, examining anew the alternatives of self-treatment, shifting production, and closing down in light of potential ICE costs. Both municipal and corporate officials will spend time and money exploring treatment and financing possibilities, in negotiating new agreements, and possibly in revising facilities plans. The process of renegotiating agreements is not simple because industries will refrain from making decisions about participating in POTWs until all their costs are known, including pretreatment, user charges, and capital costs. At the same time, because of economies of scale, capital charges and O&M charges per unit of flow are an inverse function of the size of the plant. Small municipalities with a "large" proportion of industrial flow cannot reasonably estimate future charges to industries without knowing what the total industrial flow will be. These municipalities will find themselves calculating charges and economic burdens for several possible facilities plans. Large cities will have less difficulty in revising facilities plans, but they too will face the task of financing the industrial portion and renegotiating agreements with industries.

Many letters to EPA concerning the Industrial Cost Exclusion commented on these administrative costs of delay. Virtually all of the communities listed as affected by the ICE in the short term will bear these costs. (Only those communities that recently received Step 1 planning grants and who have yet to secure industrial participants and to define the sizes and types of POTWs they want will escape.)

Thus, one issue implicit in P.L. 96-483 as it now stands may be its retroactive effect in the next several years. Citizens--private, corporate, and municipal--have previously criticized EPA for promulgating retroactive regulations and other program requirements. Many comments to EPA recognized that the statutory requirement of Industrial Cost Exclusion may well require communities and industries to reevaluate decisions already made and force changes in some facilities plans and designs that are nearly complete.

From a municipal perspective EPA has explicitly estimated two of the three parts of the cost of delay: the increased cost of construction and increased financing charges. Although administrative costs of delay will be important, EPA is not able to estimate them because they will be unique to each community. They are a function of the number of affected industries, the feasibility of the options considered, and the desire of all parties to negotiate agreements and begin building a POTW. Although the administrative costs of delay remain unquantified, they are, nevertheless, reflected in increased construction costs: the time that these administrative activities consume drives the increased construction costs.

Possible Municipal Savings from ICE

Like the preceding analysis of EPA's savings from ICE, this analysis of municipal costs due to ICE considers delays to projects of one to three years. Because of the number of financial variables involved and because of the variety of financial arrangements a municipality and its industries may contemplate, however, EPA has conducted a "high-low" analysis to provide a range of possible effects. Here EPA considers delays of one and three years.

The essence of EPA's approach is to calculate increased construction costs and their associated financing costs and to compare these increases with the ability of the communities to pay them. For this study EPA chose the projected growth of median household income as a measure of communities' ability to absorb larger non-Federal shares.

The appropriate technique to use for this purpose is that of present value analysis. Elements in the calculations are (1) projected increases in construction costs for sewage treatment plants, (2) estimates of future interest rates for 20 and 30 year tax-exempt bonds, (3) estimates of future growth of median household income, and (4) the recent reports from States describing costs of projects and the cost of affected industrial capacity.

Conceptually, the method EPA used is as follows:

$$\begin{array}{l}\text{Present value of}\\ \text{the cost of delay}\\ \text{to communities}\end{array} = \frac{\begin{array}{c}\text{Incremental construction}\\ \text{costs due to inflation}\end{array}}{\text{Discounted to present}} + \frac{\begin{array}{c}\text{Incremental}\\ \text{financing charges}\end{array}}{\text{Discounted to present}}$$

Projections for the sewage treatment plant construction index entered the numerator of the first term. Estimates of municipal bond rates entered the second term. Estimates of growth in median household income became the discount rates. The technical section of this chapter presents the basis for these projections, displays the formulae used, and tabulates the results of the calculations.

In addition to the projections used in the calculations, EPA made several other assumptions. The chief assumption is that communities affected by ICE will eventually construct sewage treatment plants. This assumption may not hold in all instances.

A second assumption is that while EPA can show a method of calculating the cost of delay in a specific community, the data immediately available to EPA allow it to calculate only a probable range for the national cost of delaying construction of POTWs. In the absence of other data about an affected community, that probable range, expressed as a percentage increase in the non-Federal share, becomes an expected range for a community.

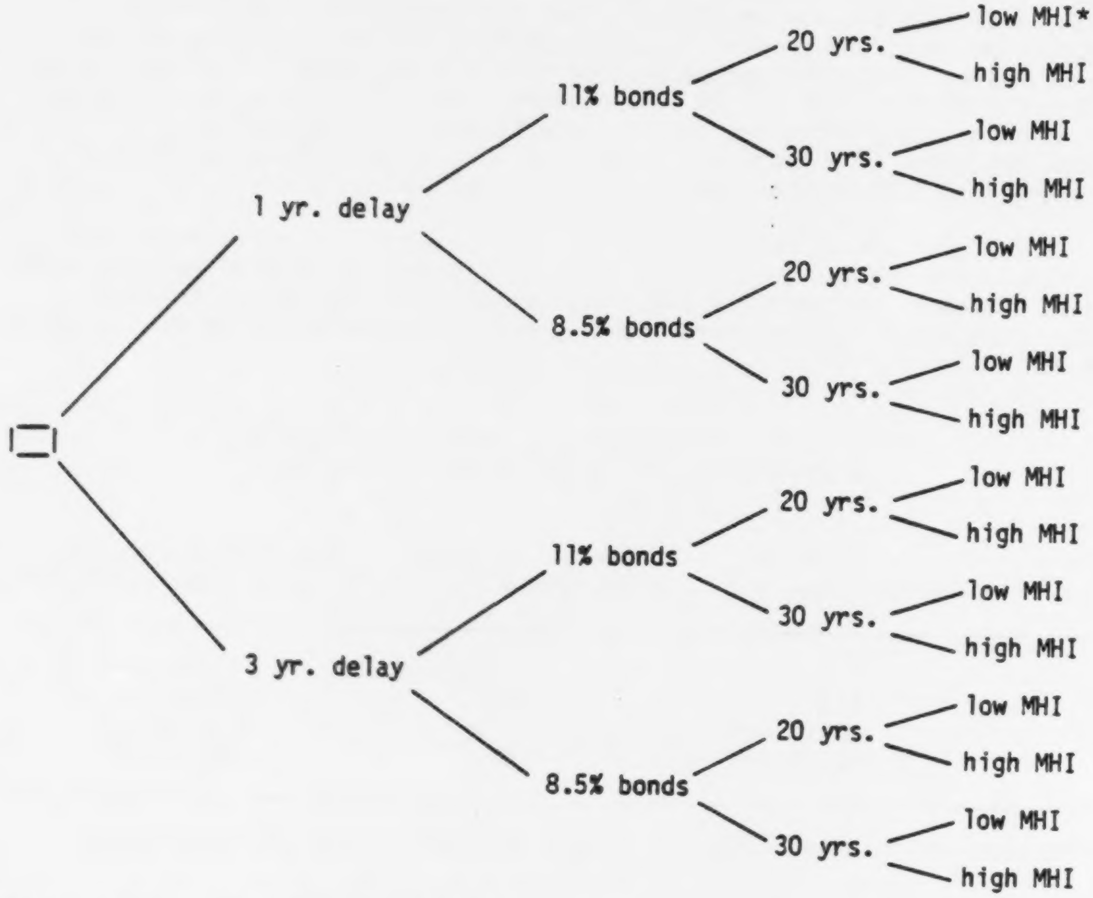
A third assumption is that the cost of delay should first be studied apart from the question of who will pay for industrial capacity in POTWs affected by ICE. This means that the first calculations show the cost of delay applied only to the non-Federal share before ICE. A second step assumes municipalities as a whole pay the additional non-Federal share and adds the effect of financing ICE to the previously calculated cost of delay. This approach is equivalent to calculating a set of minimum and maximum estimates of the effect of ICE. To the extent that communities share the costs of ICE with affected industries, the direct cost of ICE to communities would be expected to fall between the two extremes.

The following are the projections and high and low estimates of variables which EPA used in the present value calculations:

- Construction costs of sewage treatment plants increase according to the projections appearing in Table I-3 of this report.
- Length of delay: one year and three years.
- Annual increase in median household income: 7.5 percent and 10 percent.
- Interest rate on tax-exempt bonds: 8-1/2 percent and 11 percent.
- Length of tax-exempt bonds: 20 years and 30 years.

The use of four sets of high and low variables led to 16 different combinations, shown in the diagram below.

FIGURE I-1. SIXTEEN COMBINATIONS OF FINANCIAL VARIABLES
USED IN THE PRESENT VALUE ANALYSES



*MHI = growth rate of median household income.

These 16 combinations cover a range between a "low" combination of a one-year delay, 8.5 percent bonds for 30 years, and a growth rate of 10 percent in median household income to a "high" combination of a three-year delay, 11 percent bonds for 30 years, and a growth rate of 7.5 percent in median household income.

In answering the question of whether delay imposes real costs on a community, the analysis suggests that if the rate of inflation of construction costs and the interest rate on municipal bonds exceed the rate of increase in median household income, delay imposes real costs on a community. In answering the question of how large a cost delay imposes on projects, the analysis suggests that the most important factor is the difference between the estimated growth rates of median household income and the inflation of construction costs. For delays of three years, the difference between the growth rate of median household income and the interest rate charged on tax-exempt bonds also becomes important. Then the combined effect of higher construction costs and greater financing charges can add significantly to project costs. The technical section of this chapter shows the present value of the cost of delay for all 16 combinations. Table I-13 shows the percentages by which delay increases the non-Federal share in real terms under the assumptions made. The increases range from 1 to 5 percent for a one-year delay and from 0.2 to 10.5 percent for a three-year delay.

It is important to note that a disparity between the inflation of construction costs and the growth rate of median income has existed for the last decade. Between 1967 and 1979 the construction index for sewage treatment plants increased 30 percent more than did median household income during the same period.[6,7]

TABLE I-13. ESTIMATED REAL INCREASE NATIONWIDE IN NON-FEDERAL SHARE DUE TO DELAY FROM ICE

Years Delay	Inflation of Construction Costs	Growth of Median Household Income	Percentage Increase in Non-Federal Share*
1	11%	7.5%	3.6-4.6%*
1	11%	10%	0.8-0.9%*
3	10.1% Avg.	7.5%	8.3-10.5%*
3	10.1% Avg.	10%	0.2-0.3%*

*Differences in interest rates and length of bonds account for the range.

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[6] Robert Michel, "Escalation of Municipal Wastewater Treatment Costs Compared with the Increase in Nationwide Median Household Income," EPA, January 30, 1981.

[7] Calculations based upon the Administration's revised economic assumptions suggest a parallel range of -.4 percent to 6 percent for a one-year delay and -4 percent to 9.5 percent for a three-year delay. The "low" estimates (real savings) result from percentage increases in median household income which exceed percentage increases in construction costs. The "high" estimates (real costs) result from accepting the revised estimate of personal income but assuming the historical relationship between construction costs and household income (a 30 percent faster rate of increase in construction costs).

The Expected Impact of ICE on Communities

In estimating the expected impact of ICE alone on communities, EPA's approach, again, was to perform a "high-low" analysis, using the same assumptions as those used in analyzing the cost of delay. The "high" municipal option assumes that the community pays for affected industrial capacity; the "low" municipal option assumes that affected industries themselves pay for capacity excluded by P.L. 96-483. (The technical section contains rationale, the formulae, and the tabulations.)

Because Table I-13 examines the cost of delay to communities without considering the question of who pays for affected industrial capacity, it also represents the "low option," the cost of ICE to a community whose affected industries pay the entire industrial cost exclusion. The percentage increases in Table I-13 show how much such a community can expect ICE to increase its non-Federal share.

Showing expected costs of the "high" option involves two steps: (1) calculating the cost of publicly financing ICE-affected capacity for the same group of communities and using the same financial variables, and (2) adding the present values thus calculated to the costs of delay already figured. Table I-14 reports real percentage increases nationwide in the non-Federal share for financing affected capacity with tax-exempt bonds serviced by the community as a whole. These percentages (column 3) should be compared to the average increase in the local share of 60 percent, which was calculated before considering the effects of inflation and financing charges. (From Table I-2, \$1,243.7 - 0.25 x \$8,124.5 = 0.61.) Table I-14 thus shows that the incremental effect of ICE alone--without considering the effects of delay upon the original 0.25 non-Federal share--is to add, not 60 percent to the local share, but from 55 percent to 93 percent, depending upon the assumptions chosen. In this analysis, all four financial variables were important: growth rate of median household income, bond interest rates, length of bonds, and length of delay. Costs were minimal (or even negative) when growth in household income exceeded interest rates on bonds.

The results of Step 2, adding increases from delay to the construction and financing costs of ICE, appear in Table I-15. Total increases in the local share for communities that choose the "high option" of subsidizing industrial capacity range from 55 percent (a net saving resulting from one-year delay, high growth in median household income, and low interest on bonds) to 109 percent (three-year delay, high interest rate on bonds, low growth in median household income). Again, one can interpret these percentages both as potential aggregate effects and as average municipal effects under the assumptions chosen.

To gain an idea of the net savings/costs of ICE, one can contrast the percentage savings to EPA from Table I-5 with the percentage costs to localities from Tables I-13 and I-15. Table I-16 collects the three sets of figures, labeling maximum and minimum costs to communities from ICE as "high option" and "low option." With a one-year delay there is the possibility of a net savings of public money (Federal and local) if affected industries pay most of the cost of their capacity in a POTW. However, three years of delay make ICE expensive to both EPA and communities.

TABLE I-14. ESTIMATED REAL INCREASE NATIONWIDE IN NON-FEDERAL SHARE DUE TO FINANCING ICE*[8]

Years Delay	Growth of Median Household Income	Interest Rate on Municipal Bonds	Percentage by Which Construction and Financing of ICE Increases the Non-Federal Share**
1	7.5%	8.5%	71-73%
1	7.5%	11%	84-90%
1	10%	8.5%	55%
1	10%	11%	66-67%
3	7.5%	8.5%	74-75%
3	7.5%	11%	88-93%
3	10%	8.5%	55-60%
3	10%	11%	65-66%

*Construction costs are assumed to increase according to the projections shown in Table I-3.

**The high and low assumptions of 20 years and 30 years for the length of municipal bonds explain the individual ranges.

TABLE I-15. ESTIMATED REAL PERCENTAGE INCREASE NATIONWIDE IN THE NON-FEDERAL SHARE DUE TO ICE AND TO DELAY[8]

(1) Years Delay	(2) Growth of Median Household Income	(3) Interest Rate on Bonds	(4) Percentage Increase in Non-Federal Share Due to Delay (from Table I-13)	(5) Percentage Increase in Non-Federal Share from Financing ICE (from Table I-14)	(6)= (4)+(5) Total Percentage Increase in Non-Federal Share
1	7.5%	8.5%	3.6-3.7%	71-73%	75-77%
1	7.5%	11%	4-4.6%	84-90%	88-95%
1	10%	8.5%	0.8%	55%	56%
1	10%	11%	0.9%	66-67%	67-68%
3	7.5%	8.5%	8.3- 8.5%	74-75%	82-82%
3	7.5%	11%	9.9 - 10.5%	88-93%	98- 109%
3	10%	8.5%	0.2 - 0.3%	55-60%	55- 60%
3	10%	11%	0.2%	65-66%	65- 66%

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[8] Projects using the revised economic assumptions of the Administration would parallel these ranges, with the most optimistic projections suggesting, not costs of delay, but potential savings if inflation decreases And, the rate of growth in personal income remains high.

TABLE I-16. COMPARISON OF EPA'S SAVINGS FROM ICE WITH THE AGGREGATE COSTS OF ICE

	One-Year Delay	Three-Year Delay
Percent Savings to EPA	12%	-6%
"Low" Option: National Costs as a Percent of Non-Federal Share	1-5%	0.2-11%
"High" Option: National Costs as a Percent of Non-Federal Share	55%	55-104%

"Low" Option: Affected industries pay for capacity excluded by P.L. 96-483.
"High" Option: Communities finance affected capacity with tax-exempt bonds.
"Breakeven" point for EPA's short-term savings from ICE is about two years and two months of delay.

In closing, one can suggest that the cost of delay to the Federal government and to State and local governments will be a transitory phenomenon experienced only in the next four to five years by communities whose facilities plans are now well defined. One can suggest further that once these communities have built POTWs or postponed them indefinitely, Federal savings will be real, unaffected by delay. For the most part, this position is valid. However, the nature of P.L. 96-483 will extend the planning period for most projects, and to that extent lessen the potential savings. Further, with competing needs for local funds and economic uncertainties many communities may be unable to raise the money for what will amount to, on the average, a 40+ percent local share before inflation and financing charges. These concerns are discussed more thoroughly in the section on the long-range impact of ICE.

Responses of Communities to the Industrial Cost Exclusion

An important question in every community affected by the Industrial Cost Exclusion will be whether it can raise the sums suggested by its per household cost of ICE, projected increases in construction costs, financing charges, and delay. The Overview listed a number of options communities may consider when faced with the potential costs of ICE.

(1) A community may scale down the size of its POTW.

(2) A community may pay the entire cost of industrial capacity affected by ICE.

(3) A town may require industries that use a lot of water to pay "up-front" sums for their capacity in a POTW.

(4) An industry, given sufficient land, available capital, and a long enough planning horizon, may choose to self-treat its wastes.

(5) A community may postpone indefinitely building a POTW.

(6) A community may form a nonprofit, "public benefit" corporation jointly owned by city and industries. Such a corporation, without an EPA construction grant, would build a sewage treatment plant that satisfies the requirements of the Clean Water Act. Gloversville, New York, with 85 percent industrial flow, is one community that may consider this option. Although a public benefit corporation would have to raise the funds EPA otherwise would supply, some suggest that avoiding Federal and State requirements, such as paying "prevailing wages," buying American made equipment, and buying duplicate equipment, may make this choice cost-effective.

(7) A community may share the cost of excluded industrial capacity with affected industries.

Option 7 can be enlarged. Four variations concern the extent to which a community and its industries share the cost of constructing capacity affected by ICE.

(a) A community may borrow the entire amount necessary to build ICE-affected capacity and enter into contracts with the firms involved for them to service this debt (both principal and interest).

In this instance, the town is borrowing at a lower rate than industry would be able to, and is borrowing on the industries' behalf. To be sure that its bond rating does not suffer, the town must be sure to describe this debt as the contractual obligation of the industries involved. Presumably, industries would expense their annual payments. Their contractual arrangements would be footnoted in annual reports, and sophisticated financial analysts would take account of them in assessing the debt of such companies.

(b) A community may borrow the entire amount necessary to build ICE-affected capacity, but require of its industries (possibly via contracts) only "ICR-like" payments. In this instance, residents, commercial establishments, and small industries are collectively paying the interest on "ICE debt," while affected industries pay the principal.

(c) A community may borrow the entire amount necessary to construct ICE-affected capacity, but decide that it will pay both principal and interest with ad valorem taxes. Because the industries affected by ICE are part of the tax base, they pay for part of their capacity in the POTW, but pay less than under either of the two preceding options. In this instance, per household costs as calculated in this report would be overstated, and should be corrected for the proportion of assessed evaluation assigned to business and industries. Note, however, that debt ceilings and limits of tax rates may make this option impractical for some communities.

(d) In some instances a community with marginal industries may consider paying all costs associated with ICE without charging affected industries anything. Communities likely to consider this option would have one-time ICE costs per household well under $100. A number of communities affected by ICE face one-time incremental costs per household due to ICE of less than $25.

A fifth variation may occur when none of the options above works. If a marginal industry cannot negotiate an acceptable agreement with municipal officials, cannot self-treat its wastes, and the community goes ahead with building a POTW, then the affected industry will have to close down. A large city with many industries may be able to absorb such a loss (e.g., Milwaukee), but many small towns with only a few employers cannot. Even if industries affected by ICE are able to negotiate agreements with municipal officials, part of those negotiations may involve reducing production in affected plants. Some firms will shift production to plants in areas with lower water charges. Others, faced with an "elastic" demand to which they cannot pass on cost increases, will find that maximizing profits in an ICE world means producing smaller quantities. In either instance, there will be economic effects upon the communities involved unless these communities can compensate by attracting new businesses that do not use much water.

Finally, although the option of postponing indefinitely the construction of POTWs appeared earlier, it requires more comment. This option will attract communities that are economically distressed and whose industries are marginal. These communities will perhaps wait for a court-ordered compliance schedule before seriously planning treatment works. In distressed communities with marginal industries, competing needs for funds, the necessity of keeping existing industries, lagging growth in assessed valuation and in personal income, a reluctance to raise taxes and/or increase user charges, and upcoming reauthorization hearings for the Clean Water Act may dictate indefinite delay as the most prudent policy. Barely able to afford the 25 percent local share before ICE, they may decide after ICE that they cannot afford a POTW.

Of the options outlined, those two or three that a community will entertain seriously depend upon factors such as the following:

(1) The financial burden of the previously planned local share.

(2) The size of the industrial costs excluded by ICE.

(3) The community's general financial condition.

(4) The cost and availability of capital.

(5) Competing needs for municipal funds.

(6) The strength of its local industries.

(7) Any benefits which the community sees as arising from compliance with the Clean Water Act.

As stated before, the data available for this report concern principally the industrial flows affected by ICE, the costs of capacity to handle them, population, and unemployment rates. Hence EPA can do little more than suggest types of communities which will consider specific options.

However, in dealing with these seven factors and exploring financing alternatives with affected industries, many communities that want to meet the standards of the Clean Water Act may take a "cost minimizing" approach. A community using such an approach would seek to minimize both the cost of ICE to its citizens and damage to its economic base--subject to constraints suggested by the seven factors listed above. An acceptable solution would be negotiated and approximate, but guided nonetheless by the principle just described.

As part of this approach, an affected community may re-examine the type of treatment plant it needs. It may look first at the feasibility of industrial self-treatment and residential alternate treatment. If joint participation and secondary treatment are necessary, communities will look at options like the following:

- Self-treatment by a major user which also treats the community's residential wastes under a contract with the municipality. This approach may be feasible in small, "single-industry" towns.

- Joint treatment in a jointly owned sewage treatment plant. This is the "public benefit corporation" option described earlier. It may be feasible in a small town with a large percentage of industrial flow from several industries.

- Reduction in the size of the POTW planned. If corporate or joint ownership is impractical, eliminating reserve capacity in a POTW will reduce the non-Federal share and thereby lessen the incremental impact of ICE.

In financing ICE-affected capacity in a scaled down POTW, communities in most cases will be sharing the cost of ICE with their industries. The question then is how to apportion the cost. A "cost minimizing" approach would (a) charge industries for their capacity up to the point where the affected industries would shift or reduce production and (b) spread the rest of the cost among citizens and other businesses. Affected industries would pay for all their excluded capacity only if they can pass cost increases on to their customers; that is, if the demand for their products is "inelastic." More often, however, industries face elastic markets, and communities will have powerful incentives to share ICE costs with their affected industries.

A community will consider five ways to raise funds.

(1) Charging its taxpayers a small one-time fee.

(2) Borrowing a larger sum in the tax-exempt bond market.

(3) Increasing the local tax rate.

(4) Requiring some "up-front" money from affected industries.

(5) Imposing a surcharge on sewer bills of affected industries to cover part or all of the additional debt service.

The allocation of the costs of ICE among these five sources of funds will be unique to each community. Allocating costs will also require affected industries to participate fully in negotiations, sharing financial data with city officials.

As a "first cut" EPA suggests that the 80 percent of affected communities whose one-time costs of ICE per household are $400 or less may consider such an approach. Certainly, the 46 percent of affected communities whose one-time costs of ICE per household are $100 or less can consider it.

However, the 20 percent of affected communities for whom the potential impact of ICE exceeds $400 per household will need expert counsel if they are to comply with the requirements of the Clean Water Act in an ICE world. If they cannot devise an innovative solution, they may become candidates for postponing their projects indefinitely.

TABLE I-17. ECONOMIC INDICATORS OF AFFECTED COMMUNITIES

NOTES:

Population: From 1970 census or latest available.
Unemployment: The October 1980 unemployment rate for the county in which the community is located (unemployment rate under State).

+ Exceeds State rate yet below national rate.
++ Exceeds national rate yet below State rate.
++ Exceeds national rate which exceeds State rate.
+++ Exceeds State rate which exceeds national rate.

Income: 1978 per capita personal income from U.S. Department of Commerce.

Industrial Portion: Industrial portion derived from State reported data.
Household is based on U.S. Census Report of an average of 2.75 persons per household from March 1980.

State	Community Affected	Estimated Population Affected	October 1980 Unemployment Rate (UR)	1978 Per Capita Personal Income	Estimated Industrial Portion Per Household
National		38,529,200	7.1	$ 8,700	$ 88.74
Alaska - Not Affected.					
Alabama UR 8.7%	Anniston	31,000	+++	$ 5,900	$ 100.00
	Boaz	14,000	+++	6,000	236.00
	Cullman	22,000	+++	5,800	99.00
	Gadsen	36,000	+++	6,400	77.00
	Opelika	20,000		5,800	65.00
Arizona UR 6.9%	Casa Grande	18,000	++	$ 5,900	$15.00
	Chandler	30,000		8,200	403.00
	Flagstaff	35,000	++	5,900	71.00
	Phoenix	919,000		8,200	16.00
Arkansas UR 7.3%	Alma	1,600		$ 5,400	$ 654.00
	Atkins	4,000		5,600	124.00
	Bentonville	19,500		5,700	193.00
	Berryville	4,500		6,200	550.00
	Clarksville	4,600		5,100	185.00
	Clinton	1,000		5,700	1,840.00
	Decatur	3,000		7,100	596.00
	Dequeen	3,900		6,200	728.00

ECONOMIC INDICATORS OF AFFECTED COMMUNITIES (Continued)

State	Community Affected	Estimated Population Affected	October 1980 Unemployment Rate (UR)	1978 Per Capita Personal Income	Estimated Industrial Portion Per Household
Arkansas	Fayetteville	31,000		6,000	246.00
	Harrison	7,200		6,400	57.00
	Huntsville	2,600		4,800	920.00
	Jonesboro	25,000		6,200	168.00
	Little Rock	168,500		7,600	44.00
	Monticello	12,600	++	5,200	166.00
	Morrilton	6,800	++	5,300	135.00
	Murfreesboro	1,400		$ 5,000	$ 1,650.00
	Nashville	6,500		6,600	376.00
	North Little Rock	73,000		7,600	8.00
	Rogers	20,000		7,100	338.00
	Siloam Springs	15,000		7,100	43.00
	Pine Bluff	57,500		6,500	275.00
	Springdale	51,000		6,000	320.00
	Stuttgart	10,500		7,400	32.00
	Texarkana	86,000	+++	6,500	39.00
	Van Buren	8,500	+++	5,400	291.00
	West Memphis	45,500		5,200	25.00
California	Corning	5,000	++	$ 6,700	$ 15.00
UR 6.7%	Eureka	25,000	++	7,300	77.00
	Hughson	3,000	++	7,900	1,285.00
	Malibu	70,000		9,400	3.00
	Manteca	14,000	++	8,300	59.00
	Modesto	2,700		7,900	10,300.00
	Oakview	2,500	++	7,900	1,100.00
	Orange City	75,000		7,900	187.00
	Santa Rosa	51,000		9,300	1.00
	Vacaville	22,000		7,800	119.00
	Watsonville	15,000		7,800	2,200.00
	Contra Costa Co.	320,000		9,800	5.00
	San Francisco	800,000		11,900	6.00
	San Jose & Santa Clara	550,000		9,800	41.00
	Los Angeles Co.	3,500,000	++	9,400	9.00
	Los Angeles	3,500,000	++	9,400	7.00
Colorado	Broomfield	57,000		$ 8,300	$ 11.00
UR 6.3%	Delta	5,800	+	5,400	223.00
	Fort Morgan	8,000	+	7,700	258.00
	Greeley	40,000	+	6,900	174.00
	Montrose	30,000	++	5,800	147.00
	Westminster	64,000	+	8,200	5.00
	Colorado Springs	232,000	++	7,000	4.00
	Denver	655,000	+	9,900	8.00
	Pueblo	110,000	+	7,400	20.00

ECONOMIC INDICATORS OF AFFECTED COMMUNITIES (Continued)

State	Community Affected	Estimated Population Affected	October 1980 Unemployment Rate (UR)	1978 Per Capita Personal Income	Estimated Industrial Portion Per Household
Connecticut UR 5.6%	Manchester	50,000		$ 8,900	$ 113.00
	Milford	60,000		8,100	5.00
	New Haven	138,000	+	8,100	23.00
	North Haven	15,000		8,100	72.00
	Suffield	9,000		8,900	320.00
	Wallingford	40,000		8,100	72.00
	Winchester	15,000		8,500	18.00
Delaware UR 6.9%	Wilmington	393,000		$ 9,200	$ 42.00
District of Columbia - Not Affected.					
Florida UR 6.8%	Orlando	99,000		$ 8,000	$ 56.00
	Pensacola	59,500		6,000	32.00
	Fort Lauderdale	140,000		9,000	1.00
	Jacksonville	528,900		7,500	26.00
	Miami	334,900	++	8,600	1.00
Georgia UR 6.3%	Calhoun	7,500	++	$ 5,800	$ 253.00
	Dalton	26,000	++	7,000	3,043.00
	LaGrange	24,000		6,400	327.00
	Rome	43,000	++	6,700	138.00
Hawaii UR 5.4%	Honolulu	350,000		8,800	31.00
Idaho UR 6.1%	Blackfoot	10,000		$ 5,700	$ 2.00
	Boise	100,000		8,800	6.00
	Idaho Falls	40,000		7,300	48.00
	Lewiston	30,000	+	8,300	0.30
	Pocatello	72,000	+	5,700	1.50
Illinois UR 8.8%	Arthur	2,300		$ 8,300	$ 3.00
	Belleville	44,000	+++	7,000	9.00
	Belvidere	17,000	++	9,000	388.00
	Canton	14,000		7,100	9.00
	Centralia	13,000	+++	6,800	106.00
	Chillicothe	6,000	+++	6,900	4.00
	Clinton	7,600	++	6,800	291.00
	Decatur	89,000	+++	6,400	426.00
	Fairfield	5,800	+++	6,600	250.00
	Geneva	9,100	+++	8,900	37.00

ECONOMIC INDICATORS OF AFFECTED COMMUNITIES (Continued)

State	Community Affected	Estimated Population Affected	October 1980 Unemployment Rate (UR)	1978 Per Capita Personal Income	Estimated Industrial Portion Per Household
Illinois	Herrin	9,500	+++	6,600	376.00
	Jacksonville	19,000		8,700	30.00
	Joliet	74,000	+++	8,100	241.00
	Kankakee	31,000	+++	8,100	831.00
	Milan	5,100	+++	9,000	85.00
	Monticello	4,500		8,800	986.00
	Peotone	2,500	+++	8,100	210.00
	Roselle	9,200		10,900	149.00
	St. Charles	16,000	++	8,900	365.00
	Spring Valley	5,400	+++	7,800	83.00
	Streator	15,000	++	8,200	129.00
	Taylorville	11,000	+++	7,900	816.00
	Waverly	1,400		8,700	20.00
	Woodstock	11,000	++	8,600	20.00
Indiana UR 8.6%	Anderson	75,000	+++	$ 7,700	$ 238.00
	Bloomington	45,000		6,000	1.00
	Clarksville	15,000		6,800	183.00
	Columbia	5,500	+++	7,700	218.00
	East Chicago	50,000	+++	8,200	583.00
	Elkhart	45,000	+++	8,300	134.00
	Jeffersonville	21,000		6,800	13.00
	Michigan City	42,000	+++	7,900	105.00
	Mooresville	6,000		7,100	275.00
	Muncie	72,000	+++	6,800	306.00
	New Albany	40,000	++	7,200	48.00
	Plymouth	8,000	++	7,300	34.00
	Terre Haute	72,000	++	7,000	19.00
	Vincennes	22,000	++	6,700	250.00
	Warsaw	11,000		7,500	250.00
	Fort Wayne	185,000	+++	8,300	123.00
	Hammond	120,000	+++	8,200	62.00
	Indianapolis	775,000	++	8,700	18.00
Iowa UR 5.3%	Boone	12,500		$ 7,300	$ 16.00
	Cedar Falls	35,000		8,100	20.00
	Charles City	9,100		7,400	158.00
	Fairfield	8,700		7,700	12.00
	Fort Dodge	31,200	+	7,600	18.00
	Iowa City	47,700		7,700	102.00
	Marshalltown	26,500	+	8,300	136.00
	Newton	15,600		7,700	289.00
	Waterloo	73,000	+	8,100	88.00
	Des Moines	220,000		8,200	38.00

ECONOMIC INDICATORS OF AFFECTED COMMUNITIES (Continued)

State	Community Affected	Estimated Population Affected	October 1980 Unemployment Rate (UR)	1978 Per Capita Personal Income	Estimated Industrial Portion Per Household
Kansas UR 4.4%	Dodge City	23,000		$ 8,900	$ 957.00
	Hutchinson	40,000	++	7,600	350.00
	Liberal	15,000		9,000	300.00
	Olathe	20,000	+	10,700	138.00
	South Hutchinson	5,000	++	7,600	220.00
	Kansas City	200,000	+	8,200	138.00
	Wichita	300,000		16,700	6.00
Kentucky UR 7.8%	Lexington	90,000		$ 7,800	$ 9.00
	Middleboro	11,700	++	5,600	141.00
	Owensboro	51,400	++	7,600	5.00
Louisiana UR 6.1%	Pineville	18,000	++	$ 6,000	$ 67.00
	Shreveport	133,000	+	7,400	47.00
Maine UR 7.0%	Biddeford	20,000		$ 6,600	$ 92.00
	Carinna S.D.	2,000		5,900	1,513.00
	North Berwick	2,000		6,600	96.00
	South Paris	2,700	++	5,700	2,118.00
Maryland UR 5.9%	Frederick	30,000	++	$ 7,100	$ 64.00
Massachusetts UR 5.6%	Billerica	32,000		$ 8,900	$ 455.00
	Dudley	9,000		7,400	38.00
	Gardner	20,000	++	7,400	193.00
	South Bridge	18,000	++	7,400	229.00
	South Essex	80,000	+	8,300	382.00
	Taunton	60,000	++	6,700	62.00
	Webster	20,000	+	7,400	1,458.00
	New Bedford	160,000	++	6,700	653.00
	Worcester	300,000	+	7,400	37.00
	Boston	3,000,000		7,100	21.00
Michigan UR 12.1%	Benton Harbor	72,000	+++	$ 7,600	$ 1.00
	Calumet	1,000	++	5,300	4,070.00
	Cedar Springs	2,900	++	8,000	1,067.00
	Constantian	1,700	++	7,300	12.00
	Flushing	7,100	+++	9,000	107.00
	Hudson	2,600	+++	7,700	844.00
	Marine City	4,600	++	7,300	970.00
	Midland	34,900		8,500	1.00
	Memphis	1,100	++	7,300	1,125.00
	Monroe	23,900	++	7,700	24.00

ECONOMIC INDICATORS OF AFFECTED COMMUNITIES (Continued)

State	Community Affected	Estimated Population Affected	October 1980 Unemployment Rate (UR)	1978 Per Capita Personal Income	Estimated Industrial Portion Per Household
Michigan	Mount Clemens	20,500	+++	9,400	90.00
	Muskegon Co.	5,400	+++	6,900	458.00
	Otsego	4,500	++	6,700	81.00
	Paw-Paw	3,200	++	6,800	138.00
	Port Huron	35,800	+++	7,300	931.00
	Reed City	2,300	+++	5,100	102.00
	Rochester	7,100		10,900	62.00
	South Haven	6,500	++	6,800	3.00
	Sturgis-St. Joseph	9,300	++	7,300	157.00
	Saginaw	92,000	+++	8,400	33.00
	Saginaw-Frankenmuth	2,800	+++	8,400	472.00
	Saline	4,800	++	9,200	37.00
	Sault St. Marie	15,000	+++	5,000	166.00
	Sparta	3,100	++	8,000	3,325.00
	Tecumseh	7,100	+++	7,700	697.00
	Vasser	2,800	+++	7,200	264.00
	Wyoming	57,000	++	8,000	23.00
	Muskegon	114,000	+++	6,900	101.00
	Lansing	132,000	++	8,500	313.00
	Genesee	657,000	+++	9,000	13.00
Minnesota UR 5.[illegible]%	Aitkin	1,800	++	$ 4,700	$ 3,819.00
	Albany	1,600	++	5,850	154.00
	Blooming Prairie	1,800		8,300	458.00
	Frazee	1,000	++	6,500	22.00
	Le Sueur	3,800	+	7,600	362.00
	Owatonna	15,300		8,300	126.00
	Pelican Rapids	1,800	+	5,900	3,056.00
	Perham	2,000	+	5,900	1,169.00
	Sleepy Eye	3,400		7,200	80.00
	Spring Valley	2,600		7,800	370.00
	Weseca	6,800		7,400	45.00
	Well	2,800		7,800	246.00
	Worthington	800		7,600	8,250.00
	Duluth	110,000	++	7,500	50.00
	Minneapolis-St. Paul	1,800,000		9,900	35.00
Mississippi UR 6.8%	Biloxi	89,300		$ 6,100	$ 97.00
	Clarksdale	21,700		4,700	51.00
	Corinth	11,600	++	5,900	521.00
	Hattiesburg	38,300		5,900	72.00
	Jackson	170,000		7,900	49.00
	Laurel	24,100		6,000	167.00
	McComb	12,000	+	4,700	115.00

ECONOMIC INDICATORS OF AFFECTED COMMUNITIES (Continued)

State	Community Affected	Estimated Population Affected	October 1980 Unemployment Rate (UR)	1978 Per Capita Personal Income	Estimated Industrial Portion Per Household
Mississippi	Morton	3,000		5,200	550.00
	Ocean Springs	10,000	++	6,200	87.00
	Pearl	10,000		5,800	19.00
Montana UR 5.3%	Hamilton	3,000	++	$ 5,400	$ 92.00
Nebraska - No information was available.					
Nevada	Carson City	32,000	++	$ 9,600	$ 26.00
UR 6.4%	Las Vegas	196,000	++	9,000	3.00
	Reno/Sparks	130,000		11,200	3.00
New Hampshire	Lincoln	1,300	+	$ 7,400	$ 2,623.00
UR 4.5%	Manchester	84,600	+	7,800	255.00
New Jersey	Bayshore	65,000	++	$ 7,800	$ 47.00
UR 6.8%	Cinnaminson	26,000		7,400	107.00
	East Windsor	40,000		8,500	23.00
	Ewing-Lawrence	55,000		8,500	11.00
	Landis	47,600	++	7,500	150.00
	Linden-Rosell	25,000	+	9,600	64.00
	Lepatcong	39,000		7,700	14.00
	Manasquan	60,000		8,600	118.00
	Mapleshade	36,000		7,500	57.00
	North Burlington	84,000		7,500	34.00
	Raritan	9,000		10,700	173.00
	Rochaway Valley	59,000		10,100	22.00
	Morris	10,000		10,100	427.00
	Morris	20,000		10,100	115.00
	Camden	485,000		7,700	415.00
	Elizabeth	500,000	++	9,600	17.00
	Gloucester	277,000		6,800	11.00
	Hudson	605,000	++	8,100	59.00
	Middlesex	100,000		9,100	1,290.00
	Passaic Valley	250,000	++	8,300	199.00
	Rahway Valley	200,000	++	9,600	122.00
	Somerset-Raritan	126,000		10,800	22.00
	Trenton	264,000		8,500	45.00
New Mexico	Las Cruces	95,000		$ 5,700	$ 7.00
UR 7.7%	Roswell	120,000		6,200	20.00

ECONOMIC INDIC'TORS OF AFFECTED COMMUNITIES (Continued)

State	Community Affected	Estimated Population Affected	October 1980 Unemployment Rate (UR)	1978 Per Capita Personal Income	Estimated Industrial Portion Per Household
New York UR 7.3%	Auburn	46,000	+++	$ 6,500	$ 19.00
	Avon	3,000		6,600	587.00
	Batavia	18,000	+++	7,000	108.00
	Blasdell	4,000	+++	7,700	323.00
	Canastota	5,000	+++	6,100	2,772.00
	Champlain-Rouses	4,000	+++	5,300	536.00
	Cuba	2,000	+++	5,600	5,857.00
	Dundee	2,000		6,200	916.00
	Endicott	17,000		7,500	176.00
	Fort Edwards	4,000	+++	5,900	832.00
	Fulton	15,000	+++	6,300	1,125.00
	Gloversville	27,000	+++	6,300	2,096.00
	Granville	3,000	+++	5,900	69.00
	Heuvelton	1,000	+++	5,500	605.00
	Ithaca	27,000		6,600	608.00
	Kingston	26,000	+++	7,100	85.00
	Lake George	1,000	+++	7,200	11,275.00
	Orange	230,000	+++	7,400	10.00
	Rochester	300,000	++	8,900	116.00
	Syracuse	200,000	+++	7,500	23.00
	Yonkers	205,000		11,300	8.00
	Norwich	9,000	+++	6,100	87.00
	Oswego	21,000	+++	6,300	62.00
	Orangeburg	3,500		9,000	354.00
	Port Jefferson	8,000		7,900	113.00
	Seneca Falls	8,000		7,000	847.00
	Silver Creek	3,500	+++	6,800	1,257.00
	White Plains	51,000		11,200	1.00
	Wilson	1,500	+++	6,700	1,467.00
North Carolina UR 6.3%	Asheboro	10,800		$ 7,000	$ 432.00
	Durham	95,500		7,600	26.00
	Forest City	7,200	+	5,900	191.00
	Greenville	29,100	+	6,100	38.00
	High Point	63,200	+	8,300	22.00
	Lexington	17,200	++	6,900	303.00
	Morganton	33,600		6,600	467.00
	New Bern	14,700	++	6,200	75.00
	Randleman	2,300		7,000	957.00
	Roanoke Rapids	13,500	++	5,000	407.00
	Roxboro	5,400	++	5,900	458.00
	Thomasville	15,200	++	6,900	54.00
	Buncombe	145,000		6,700	85.00
	Charlotte	241,000		8,500	10.00
	Winston-Salem	133,000		8,300	66.00

ECONOMIC INDICATORS OF AFFECTED COMMUNITIES (Continued)

State	Community Affected	Estimated Population Affected	October 1980 Unemployment Rate (UR)	1978 Per Capita Personal Income	Estimated Industrial Portion Per Household
North Dakota	Fargo	72,000		8,600	3.00
UR 4.3%	West Fargo	15,500		8,600	13.00
Ohio	Alliance	25,800	++	$ 7,700	$ 28.00
UR 8.1%	Ashland	20,300	++	7,200	108.00
	Avon Lake	12,500	++	7,900	418.00
	Barberton	27,000	++	8,000	117.00
	Bedford Heights	12,000	++	9,500	50.00
	Bellefontaine	11,000	++	7,600	525.00
	Berea	20,000	++	9,500	6.00
	Bryan	7,000	++	7,900	118.00
	Conneaut	15,000	++	7,000	35.00
	Clyde	6,100	++	7,400	361.00
	Defiance	16,000	++	8,400	132.00
	Delaware	20,000		7,200	48.00
	Easterly	24,000	++	9,500	74.00
	Elyria	32,000	++	7,900	120.00
	Euclid	60,000		9,500	115.00
	Findlay	38,000		8,100	111.00
	Ironton	14,000	++	5,900	479.00
	Jackson	7,000	++	5,200	334.00
	Lancaster	40,000	++	7,400	31.00
	Mansfield	57,000	++	7,400	93.00
	Marietta	16,000	++	6,600	138.00
	Maryville	8,000	+++	6,800	223.00
	Mentor	42,000	++	8,100	42.00
	Miami District	11,000	++	8,400	125.00
	Middletown	48,000	++	7,100	327.00
	Montgomery Co.	52,000		8,200	116.00
	Newark	40,000	++	7,000	323.00
	Norwalle	14,000	++	7,300	102.00
	Orrville	8,000		7,000	103.00
	Piqua	20,000	++	8,400	151.00
	Sidney	18,000	++	7,200	112.00
	Springfield	73,400	++	7,300	33.00
	Akron	240,000	+++	8,000	264.00
	Columbus	524,000		7,700	115.00
	Dayton	195,000	+++	8,200	253.00
Oklahoma	Anadorko	7,000		$ 5,500	$ 221.00
UR 5.1%	Ardmore	40,700		6,900	103.00
	Guymon	12,200		11,300	349.00
	Jay	3,500	+	4,400	558.00
	Midwest	77,000		8,500	7.00

ECONOMIC INDICATORS OF AFFECTED COMMUNITIES (Continued)

State	Community Affected	Estimated Population Affected	October 1980 Unemployment Rate (UR)	1978 Per Capita Personal Income	Estimated Industrial Portion Per Household
Oklahoma	Stillwell	32,000	++	3,700	3.00
	Westville	1,200	++	3,700	1,352.00
	Norman	112,000		6,300	3.00
	Tulsa	270,000		9,200	3.00
Oregon	Eugene	80,000	++	$ 7,400	$ 21.00
UR 8.0%	St. Helens	7,000	++	7,600	1,964.00
	Springfield	30,000	+++	7,400	8.00
	Portland	400,000		10,000	2.00
Pennsylvania	Berwick	12,000	++	$ 6,100	$ 120.00
UR 7.7%	Hanover	30,000		7,800	128.00
	Lower Wissahickon	10,000		NA	1,240.00
	New Holland	5,000		7,800	457.00
	Springettsbury	87,000	++	NA	221.00
	West Chester	20,000		9,000	367.00
	York	75,000	++	7,800	26.00
	Lancaster	308,000		7,800	11.00
	Wyoming Valley	300,000	+++	6,100	4.00
Rhode Island	Bristol	15,000		$ 8,100	$ 189.00
UR 5.9%	East Greenwich	2,500		7,900	1,969.00
	Warwick	10,500		7,900	523.00
	West Warwick	18,000	+	7,900	129.00
South Carolina	Fort Mill	4,500	++	$ 6,700	$ 53.00
UR 6.7%	North Charleston	61,200	+	6,800	66.00
South Dakota	Hoven	700		$ 7,500	$ 197.00
UR 4.9%	Huron	13,000		7,000	12.00
	Madison	7,000	+	6,700	196.00
	Pollock	400		6,500	2,406.00
	Rapid City	46,000	+	7,000	16.00
Tennessee	Chattanooga	130,000	++	$ 8,000	$ 425.00
UR 6.0%	Knoxville	180,000		6,900	80.00
	Memphis	700,000		7,600	19.00
	Nashville	400,000		8,500	61.00
Texas	Brenham	10,500		$ 7,300	$ 760.00
UR 4.4%	Corsicana	22,800		7,300	49.00
	Sulphur Springs	11,600		6,700	122.00
	Vernon	11,500		7,000	87.00
	Amarillo	137,500		8,800	40.00
	San Antonio	879,000		6,600	137.00

ECONOMIC INDICATORS OF AFFECTED COMMUNITIES (Continued)

State	Community Affected	Estimated Population Affected	October 1980 Unemployment Rate (UR)	1978 Per Capita Personal Income	Estimated Industrial Portion Per Household
Utah	Central Weber	192,000		$ 6,900	$ 9.00
UR 6.1%	Salina	2,000		5,800	576.00
Vermont	Bennington	12,500	++	$ 7,100	$ 110.00
UR 6.4%	St. Albans	8,000		6,100	216.00
	Swanton	3,000		6,100	183.00
	Troy	600	++	5,400	3,007.00
Virginia	Pepper's Ferry	30,000	++	$ NA	$ 69.00
UR 5.1%	Waynesboro	14,000	++	NA	65.00
Washington	Walla Walla	23,000		$ 8,000	$ 26.00
UR 7.5%	Prosser	10,000	++	9,000	289.00
West Virginia UR 8.7%	Martinsburg	1,500		$ 6,600	$ 37.00
Wisconsin	Butte Des Morts	5,100	+	$ 7,800	$ 205.00
UR 6.3%	Plymouth	6,100		7,800	969.00
	Abbotsford	1,900	++	5,700	188.00
	Marshfield	17,500	+	7,400	432.00
	Beaver Dam	14,500	++	7,000	2,181.00
	Madison	170,000		8,000	242.00
	Milwaukee	725,000		8,700	687.00
Wyoming - Not Affected.					
American Samoa	American Samoa	35,000		NA	$ 157.00
Guam - Not Affected.					
North Marianas - Not Affected.					
Puerto Rico	San Juan	450,000		NA	$ 30.00
	Bayaman	180,000		NA	46.00
Pacific Trust Territories - Not Affected.					
Virgin Islands - Not Affected.					

TECHNICAL SECTION

Discount Rates Used in Calculating the Savings to EPA from ICE and the Cost of ICE to Communities

To set the context for this discussion, consider three parties who are interested in EPA's dispersal of funds in the Construction Grants Program: (1) Treasury, (2) EPA, and (3) recipient communities. From the point of view of Treasury, which must borrow money to cover the Federal deficit, any funds that EPA has been appropriated but does not spend means that Treasury has to borrow less. Those unborrowed and unspent funds remain invested in the economy, growing at the "opportunity cost of capital." Hence, Treasury reaps benefits that occur from delay.

From the point of view of EPA's Construction Grants Program, however, any part of an appropriation that is unspent at the end of the year cannot, by law, be invested in securities until the time it is needed or shifted into another type of investment. The funds remain in a ledger account at Treasury. Having no alternative uses for these unspent funds, EPA's discount rate is zero. The funds remain "on the books," but decrease in value during delays. Further, EPA's budget for construction grants is likely to decrease in the future. It will not increase with inflation or with growth in the gross national product. Delays from ICE of more than two years are likely to impose, not savings, but costs upon EPA. For these reasons, calculations of the cost of delay to EPA, for example, subtract construction dollars indexed to 1983 (what EPA will spend with ICE) from construction dollars indexed to 1982 (what EPA would have spent without ICE) without discounting.

From the point of view of affected communities, however, money does have alternative uses. It can be spent on other local projects and reap social benefits. Communities' budgets can increase fairly easily with growth in personal or household income. This study judges increased costs in relation to the rate at which money grows. The growth rate of median household income captures the ability of communities to pay higher future costs and is used to discount costs to communities from ICE.

Calculations of the Savings to EPA from ICE

The calculations used to determine the savings left after a delay of one year are the following (the procedure is the same for calculating the savings left after two and three years of delay in millions):

(a)	Cost of all affected projects in 1982 dollars (CBO/DRI)	- $ 9,773.8M
(b)	Federal share without ICE in 1982 dollars	- $ 7,330.3M
(c)	Cost of all affected projects in 1983 dollars	- $10,846.2M
(d)	Cost of affected industrial portion in 1983 dollars	- $ 1,660.3M
(e)	Federal share with ICE in 1983 dollars	- $ 6,474.3M
(f)	"Nominal" Federal savings from ICE with a one-year delay, (b) - (e)	- $ 855.5M

More relevant than the dollars cited here are the percentage savings to EPA from ICE listed in Table I-5. No year has seen 10 billion dollars worth of projects start. Further, budgetary uncertainty in the Construction Grants Program makes even historical levels questionable.

Present Value of the Cost of Delay to Municipalities

Table I-18 shows the formula used to estimate the present value of the cost of delay to municipalities. In essence, it calculates the present value of the difference between two cost streams.

TABLE I-18. FORMULA USED TO COMPUTE THE COST OF DELAY

$$\text{Present Value of Cost of Delay to Municipalities at Time 0} = \left[\frac{\left(\left[\frac{C \times I_{ttd}}{(1 + r)^d} \right] - C \times I_t \right) (1 + r)^d \, (a_r)}{a_b} \right] (1 + r) - (t + d)$$

C = Cost of construction of non-Federal share of POTW before ICE in 1980 dollars.

d = Projected years of delay due to ICE.

t = Number of years from 1980 a project was slated to begin construction before ICE.

r = Projected percentage increase in median household income.

a_r = Annuity factor for projected rate of increase in median household income for n years.

I = Projected Sewage Treatment Plant Construction Index.

n = Number of years in which bonds will be paid off.

a_d = Annuity factor for calculating annual debt service on a bond at a given interest rate for n years.

Elements in the calculations are (1) projected increases in construction costs for sewage treatment plants, (2) estimates of future interest rates for 20 and 30 year tax-exempt bonds, (3) estimates of future growth of median household income, and (4) the recent reports from States describing project costs and the cost of industrial capacity in communities affected by ICE.

TABLE I-19. FORMULA USED TO COMPUTE THE COST OF FINANCING ICE

$$\text{Present Value of Cost to Municipality of Financing ICE} = \frac{\dfrac{(C \times I_{t+d})(a_r)}{a_d}}{(1 + r)^{t+d}}$$

C = Cost of construction of ICE-affected industrial capacity in 1980 dollars.

I = Projected Sewage Treatment Plant Construction Index.

t = Number of years from 1980 a project was slated to begin construction before ICE.

d = Projected years of delay due to ICE.

r = Projected percentage increase in median household income.

a_r = Annuity factor for projected rate of increase in median household income for n years.

a_d = Annuity factor for calculating annual debt service on a bond at a given interest rate for n years.

r = Number of years in which bonds will be paid off.

To estimate increases in the construction costs of sewage treatment plants, EPA used the projections shown in Table I-3.

To estimate future interest rates on tax-exempt bonds, EPA referred to the January 6, 1981, issue of The Bond Buyer and to The Wall Street Journal. The Bond Buyer lists the average interest rate of a selected group of 30 year revenue bonds for each week in 1980. The Wall Street Journal graphs average weekly interest rates of the Dow-Jones municipals, a group of 20 year municipal bonds. The highest weekly average interest rate during 1980 for the 25 revenue bonds was 11.4 percent; the lowest was 7.2 percent. Interest rates on the Dow-Jones municipals were similar. Based on these weekly averages, EPA chose interest rates of 8-1/2 percent and 11 percent to represent high and low estimates of interest on tax-exempt bonds during the next five years.

To estimate increases in median household income, EPA looked first at the pattern of increases in median household income over the last 12 years. Table I-20 shows median household income for U.S. households in current dollars from 1967 to 1979. From 1967 to 1979, median household income increased 132 percent. The approximate compound rate over the 12 years is 6.7 percent. At the same time, in constant dollars, as measured by the CPI, median household income actually declined from the previous year in 1970, 1971, 1974, 1975, and 1979. To illustrate the cost of delay under different scenarios, EPA used low and high growth rates for median household income: 7.5 percent and 10 percent.

TABLE I-20. U.S. MEDIAN HOUSEHOLD INCOME IN CURRENT DOLLARS

Year	Median Household Income	Percent Change from Previous Year
1967	$7,143	
1968	7,743	8.4
1969	8,389	8.3
1970	8,734	4.1
1971	9,028	3.4
1972	9,697	7.4
1973	10,512	8.4
1974	11,197	6.5
1975	11,800	5.4
1976	12,686	7.5
1977	13,572	7.0
1978	15,064	11.0
1979	16,550	9.9

Average increase from the previous year is 7.1 percent. The approximate compound rate over the 12 years is 6.7 percent.

Source: U.S. Census.

Like the calculations of the savings to EPA from ICE, the most important results of the present value calculations are not the dollar figures, but the percentages derived from them.

The present value calculations in the tables that follow are based upon aggregated data from 160 communities in 15 States: Arizona, California, Idaho, Illinois, Indiana, Kansas, Kentucky, Maryland, Minnesota, Nevada, Ohio, Pennsylvania, Virginia, West Virginia, and Wisconsin. Their projects affected by ICE totaled $3.94 billion, not far different from historical construction grant budgets. More important, the ratio of ICE costs to the 25 percent non-Federal share for these States differed by only 0.002 from the same ratio for the national totals. Thus the percentages reported for these 16 States should hold nationally.

Further, in the absence of detailed data about a community, these percentages also represent expected effects of ICE in a community.

- Table I-21 shows the results of calculating the cost of delay and the resulting percentage increase in the local share.
- Table I-22 calculates the present value of and percent increase in non-Federal share from publicly financing the industrial costs excluded by P.L. 96-483, again using the growth of median household income as the discount rate. It shows present values of 16 combinations for collectively financing ICE portions of POTWs with tax-exempt bonds. Since the 1980 cost of the ICE portions is $605M, the financing and inflation effects are substantial in all combinations except those which assume an annual increase in median household income of 10 percent.
- Table I-23 adds the present value of the cost of delay to the present value of building and financing ICE-affected capacity with tax-exempt bonds--the "high option." It also shows the potential combined effect of delay and ICE as a percentage increase in local share. Again, one can interpret these percentages both as the potential effect for the 15 State total and as an average, or expected, effect in a municipality.

TABLE I-21. PRESENT VALUE OF THE COST OF DELAY AND PERCENTAGE INCREASE IN THE LOCAL SHARE[9]

Sixteen combinations, lettered (a) through (p), of high and low values of four variables: (1) length of delay, (2) annual percentage increase in median household income, (3) interest rate on tax-exempt bonds, and (4) length of bonds.

High and low values for the four variables:

(1) length of delay: One year and three years;
(2) annual increase in median household income; 7.5 percent and 10 percent;
(3) interest rate on tax-exempt bonds: 8-1/2 percent and 11 percent;
(4) length of bonds: 20 years and 30 years.

The present values of the cost of delay for the combinations below are based upon a total of $3,939M for 160 projects in 15 States, which together have industrial costs excluded by P.L. 96-483 of $605M. The State and local share of these 160 projects is $985M. More important than the present values listed are the percentages by which combinations of variables increase the non-Federal share.

Assumptions:

(1) Reports from States about communities affected by ICE are in 1980 dollars.

(2) The entire non-Federal share is financed with tax-exempt bonds.

(3) The increases in median household income are annual increases and occur over the entire length of the bonds issued.

(4) Projects delayed one year would otherwise have begun construction in 1982 and now begin construction in 1983.

(5) Projects delayed three years would otherwise have begun construction in 1982 and now begin construction in 1985.

(6) The cost of delay as calculated here deals with the cost to localities of delaying the original projects and concerns only the 25 percent non-Federal shares. Table I-21 shows potential financial effects of the ICE portion if municipalities were to finance that with no industrial contribution.

(7) Construction costs increase according to the projections shown in Table I-3.

)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ombin-ion	Years Delay	Growth in Median Household Income	Interest Rate on Bonds	Length of Bonds	PV (1980) of Incremental Construction Costs	PV (1980) of Incremental Financing	(6)+(7)	Percentage Increases in Non-Federal Share
a)	1	7.5%	8.5%	20yrs	$33.1M	$2.6M	$35.7M	3.6%
b)	1	7.5%	8.5%	30yrs	33.1M	3.3M	36.4M	3.7%
c)	1	7.5%	11.0%	20yrs	33.1M	6.3M	39.4M	4.0%
d)	1	7.5%	11.0%	30yrs	33.1M	11.8M	44.9M	4.6%
e)	1	10.0%	8.5%	20yrs	8.6M	-0.9M	7.7M	0.8%
f)	1	10.0%	8.5%	30yrs	8.6M	-1.1M	7.5M	0.8%
g)	1	10.0%	11.0%	20yrs	8.6M	0.6M	9.2M	0.9%
h)	1	10.0%	11.0%	30yrs	8.6M	0.7M	9.3M	0.9%
i)	3	7.5%	8.5%	20yrs	75.8M	5.9M	81.7M	8.3%
j)	3	7.5%	8.5%	30yrs	75.8M	7.5M	83.3M	8.5%
k)	3	7.5%	11.0%	20yrs	75.8M	21.2M	97.0M	9.9%
l)	3	7.5%	11.0%	30yrs	75.8M	27.8M	103.6M	10.5%
m)	3	10.0%	8.5%	20yrs	2.3M	-0.2M	2.1M	0.3%
n)	3	10.0%	8.5%	30yrs	2.3M	-0.3M	2.0M	0.2%
o)	3	10.0%	11.0%	20yrs	2.3M	0.2M	2.5M	0.2%
p)	3	10.0%	11.0%	30yrs	2.3M	0.2M	2.5M	0.2%

alculations of the Cost of Delay Based upon the Current Economic Assumptions of the dministration

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
rs. elay	Increase in Construction Costs	Nominal Growth in Median Household Income	Interest Rate on Bonds	Length of Bonds	PV (1980) of Construction Inflation	PV (1980) Incremental Financing	(6) + (7)	Percent Increase in Non-Federa Share
1	13.3%	10.25%	11%	30yrs	$28M	$1.7M	$30M	3%
1	9.9%	10.25%	7%	30yrs	-$1.7M	-$1.7M	-$3.4M	-.3%
3	13.3%	10.25%	11%	30yrs	$88M	$5.5M	$93.5	9.5%
3	10.1 Avg.	10.25%	7%	30yrs	-$33.6M	-$8.6M	-$42.2	-4.3%

A chart showing the results of calculations based upon the revised economic assumptions of the Administration's appears ABOVE. Like the other optimistic calculations presented in the body of this paper, the optimistic estimates here depend upon the growth rate of median household income exceeding the inflation rate of construction costs. The pessimistic estimates here assume the historic relationship between construction costs and household income

TABLE I-22. PRESENT VALUE OF COSTS TO COMMUNITIES TO FINANCE THE CAPACITY EXCLUDED BY ICE WITH TAX-EXEMPT BONDS (15 States)[10]

Combination	(1) Years Delay	(2) Growth in Median Household Income	(3) Interest on Bonds	(4) Length of Bonds	(5) PV of Cost of Financing ICE	(6) Percentage Increase in Non-Federal Share
(a)	1	7.5%	8.5%	20 yrs.	$700M	0.71
(b)	1	7.5%	8.5%	30 yrs.	715M	0.73
(c)	1	7.5%	11.0%	20 yrs.	832M	0.84
(d)	1	7.5%	11.0%	30 yrs.	883M	0.90
(e)	1	10.0%	8.5%	20 yrs.	546M	0.55
(f)	1	10.0%	8.5%	30 yrs.	532M	0.55
(g)	1	10.0%	11.0%	20 yrs.	649M	0.66
(h)	1	10.0%	11.0%	30 yrs.	658M	0.67
(i)	3	7.5%	8.5%	20 yrs.	729M	0.74
(j)	3	7.5%	8.5%	30 yrs.	743M	0.75
(k)	3	7.5%	11.0%	20 yrs.	866M	0.88
(l)	3	7.5%	11.0%	30 yrs.	919M	0.93
(m)	3	10.0%	8.5%	20 yrs.	542M	0.55
(n)	3	10.0%	8.5%	30 yrs.	593M	0.60
(o)	3	10.0%	11.0%	20 yrs.	645M	0.65
(p)	3	10.0%	11.0%	30 yrs.	654M	0.66

Cost of Industrial Capacity Affected by ICE in 1980 dollars = $605M.
Cost of non-Federal share before ICE in 1980 dollars = $985M.

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[10] A range of present value calculations based upon the current economic assumptions of the Administration would parallel the ranges shown in this table.

TABLE I-23. PRESENT VALUE OF THE COMBINATION OF THE COST TO COMMUNITIES OF DELAY AND THE FINANCING OF COSTS EXCLUDED BY ICE

(1) Combination	(2) PV of Delay	(3) PV of Cost ICE	(4) (2)+(3)	(5) Percentage Increase in non-Federal Share
(a)	$35.7M	$700M	$736M	0.75%
(b)	36.4M	715M	751M	0.76%
(c)	39.4M	832M	871M	0.88%
(d)	44.9M	883M	928M	94%
(e)	7.7M	546M	554M	56%
(f)	7.5M	532M	540M	55%
(g)	9.2M	649M	658M	67%
(h)	9.3M	658M	667M	68%
(i)	81.1M	729M	811 M	83%
(j)	83.3M	743M	826M	84%
(k)	97.0M	866M	963M	98%
(l)	103.6M	919M	1,023 M	104%
(m)	2.1M	542M	544M	55%
(n)	2.0M	593M	595M	60%
(o)	2.5M	645M	648M	66%
(p)	2.5M	654M	657M	67%

Assumptions: See Tables I-20 and I-21.

LONG-RANGE IMPACTS OF INDUSTRIAL COST EXCLUSION

Exclusion of Federal funding for large industrial flows must be viewed in the overall context of local sewerage expenditures and local financial capability. Incremental costs for a local community due to ICE are more likely to affect POTW construction if the community is already near the margin of its financial capability. For this reason, this section begins with an overview of the anticipated cost impacts of wastewater treatment, and then attempts to estimate the incremental cost effects of ICE by focusing on three areas: (1) the ability of local communities to raise capital for construction; (2) impacts on user charges; and (3) secondary economic impacts due to location or relocation decisions made by industrial users.

AN OVERVIEW OF SEWAGE TREATMENT COSTS AND LOCAL FINANCIAL CAPABILITY

Sewage treatment costs are increasing at a time when pressures on municipal finances are increasing. This fact is highlighted by long-range estimates of anticipated sewerage costs which suggest that this trend can be expected to continue. While there is a great variation from community to community in expected cost burden, cost impacts will probably be greatest for older urban centers with major rehabilitation needs and for many small communities facing high per capita costs.

Increasing Sewage Treatment Costs

A number of factors point to substantial increases in sewage treatment costs on a national scale.

1. Clean Water Act requirements

Most communities have not yet faced the costs of constructing and operating facilities necessary to meet Clean Water Act requirements. Much of the approximately $25 billion previously awarded for construction represents projects not yet on line and with cost impacts not fully realized. In addition, the 1980 Needs Survey estimates remaining needs at $119 billion, with a State and local share of nearly $30 billion.

2. Non-eligible costs

Most communities will face water pollution control costs in addition to those associated with Construction Grants eligibilities. For example, the 1980 Needs Survey identifies $113.7 billion in needs to control pollution from the non-eligible category of urban stormwater. Other communities, especially in fast-growing areas, will be paying for collection systems for new populations. Also, most projects in eligible categories involve some aspects that are ruled non-eligible, so that the State/local share is, in effect, greater than 25 percent. The total costs of non-eligible water pollution control needs are unknown, but an estimate has been prepared in conjunction with the 1980 Needs Survey. The Needs Survey estimate, illustrated in Figure I-2, is based on the assumption that all construction necessary to meet identified needs is completed or under way by the year 2000. Total local funding required is approximately $208 billion, with only

$25 billion related to construction of grant eligible projects. The three largest items for localities are operations and maintenance (O&M) ($95 billion), major capital replacement costs for worn-out sewers and plants ($55 billion), and interest ($33 billion).

3. Inflation and the cost index for O&M and construction

Costs can also be expected to rise as a result of inflation on the cost components of wastewater treatment: labor, materials, equipment, chemicals, and energy. EPA-maintained cost indices for these components show, however, that costs for construction and O&M have been increasing faster than the general rate of inflation. (Using 1972 as the base year, the O&M cost index has increased 40 percent more than the GNP implicit price deflater, while the construction cost index has increased 17 percent more.)

4. Added O&M costs for higher levels of treatment

In addition to construction costs needed to meet the Clean Water Act requirements, many communities will be facing the higher O&M costs associated with higher levels of treatment. According to the 1978 Needs Survey, 22 percent of the population was being served by plants treating sewage at levels higher than secondary. By the year 2000, more than 51 percent of the population will be served by treatment higher than secondary.

5. Meeting the backlog of deferred maintenance

Deterioration of the capital plant of older cities has accelerated in recent years due to fiscal stress and aging, according to a recent report by the Urban Institute, a nonprofit research organization. Faced with tight budgets, many cities have cut back on maintenance spending more sharply than spending for other operations. As a result, many cities, particularly older cities in the Northeast and Midwest, have accumulated massive maintenance backlogs which eventually must be faced.

Increasing Pressures on Revenues

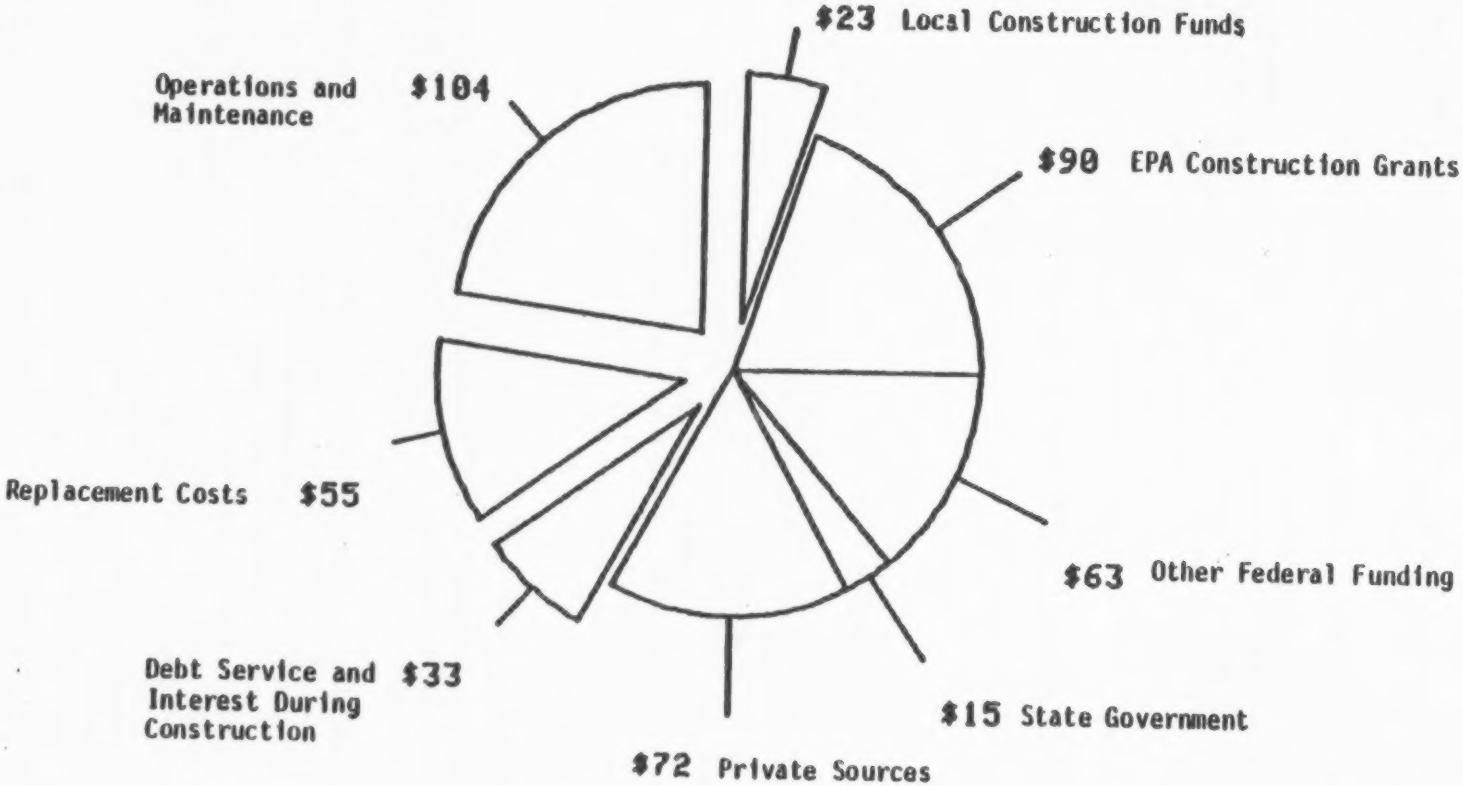
The financial capability of a community to build, operate, and maintain POTWs is not only a function of the cost of wastewater treatment, but also a result of the general financial condition of the community and its residents.

The community's general financial condition is the product of several factors, including personal income, population growth or decline, property value growth or decline, the inflation rate, the level of intergovernmental aid, caps on taxes or expenditures, municipal bond interest rates, and the condition of the national and regional economy. It is difficult to predict the long-range impact of these factors, but three trends point to sharply increased pressures on municipal revenues in the near future.

FIGURE I-2

REQUIRED FUNDING SOURCES TO SATISFY 1981-2000 NEEDS

(BILLIONS OF 1980 DOLLARS)



TOTAL 1981-2000 NEEDS FOR DOMESTIC WASTEWATER COLLECTION & TREATMENT = $455 BILLION

1. Increasing fiscal stress

According to a study of 300 cities prepared for the Congressional Joint Economic Committee,[7] many cities will experience severe fiscal stress in the coming decade. During the period from 1978 to 1980, current expenditures were rising faster than current revenues for cities of all sizes. As a result, an increasing number of cities faced operating deficits in 1978 and 1979, and by 1980 more cities anticipated deficits than anticipated surpluses.

2. Decline in Federal assistance to cities

During the early and mid-1970's city budgets were buoyed by increases in Federal and State assistance. The following table indicates the growing importance of intergovernmental aid to the general revenues of the Nation's 45 largest cities during the period 1967-1977.

TABLE I-24. PERCENTAGE COMPOSITION OF GENERAL REVENUES; 45 LARGEST CITIES, 1967-1977

	1967	1977
Total General Revenues	100%	100%
Own Source Revenues	74.3	57.7
Property Tax	36.2	22.7
Other Taxes	24.9	23.2
Charges/Fees	13.2	11.8
Intergovernmental Revenues	25.7	42.3
State	18.6	19.3
Federal	4.7	21.1
Other	2.4	1.9

Source: John E. Peterson, "Tax and Expenditure Limitations: Projecting Their Impact on Big City Finances," presented at the American Finance Association, Atlanta, Georgia, December, 1979.

The figures in this table indicate an important change in the way cities have been raising their general revenues (including capital). In the 45 largest cities revenues raised by local sources declined from 74.3 percent of revenues in 1967 to nearly 58 percent by 1977. At the same time, there was an increase in Federal aid from 4.7 percent to more than 21 percent of total general revenues. Although smaller cities are generally less dependent on Federal aid, they experienced similar increases in Federal assistance through most of the 1970's.

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[7] "Trends in the Fiscal Condition of Cities: 1978-1980," Subcommittee on Fiscal and Intergovernmental Policy, Joint Economic Committee, United States Government Printing Office, Washington, D.C., 1980.

According to the Joint Economic Committee study, however, Federal funds for operating purposes have declined as a proportion of current total revenues for all sizes of cities during the 1978 to 1980 period. Federal funding decreased in absolute terms for all cities except the largest. Cities which enhanced their budget position by depending on Federal funds may anticipate future financial pressures if costs rise faster than Federal aid.

3. Increasing competition for scarce resources

Under increased public pressures for budgetary constraint, a downward trend in real (constant dollar) government spending began in the late 1970's. As the graphs in Figure I-3 indicate, this trend reverses nearly three decades of continued growth in expenditures at the local, State, and national levels. At the same time, cities and States are facing deferred expenditures for infrastructure improvements and employee wage increases.

Bureau of Economic Analysis data suggest that declining capital stock (roads, bridges, public buildings, sewers, etc.) may be a major problem for State and local governments. State and local constant dollar capital investment increased regularly from 1957 to 1968, but declined between 1969 and 1972 and again between 1974 and 1977 (the last year for which data are available). In real per capita terms, capital investment for States and localities was slightly lower in 1977 than in 1957 (approximately $116 versus $119). State and local net capital investment (investment minus depreciation) generally increased during the 1957 to 1967 period, but declined rapidly from a 1968 high of $23.3 billion to $6.8 billion in 1977. States and cities appear to be increasingly hard pressed to maintain a healthy capital infrastructure. Clearly, during a time of expenditure restrictions and competition for scarce resources, there will be severe economic and political constraints on public services, such as wastewater treatment, that call for increasing expenditures and larger shares of the State and local budgets.

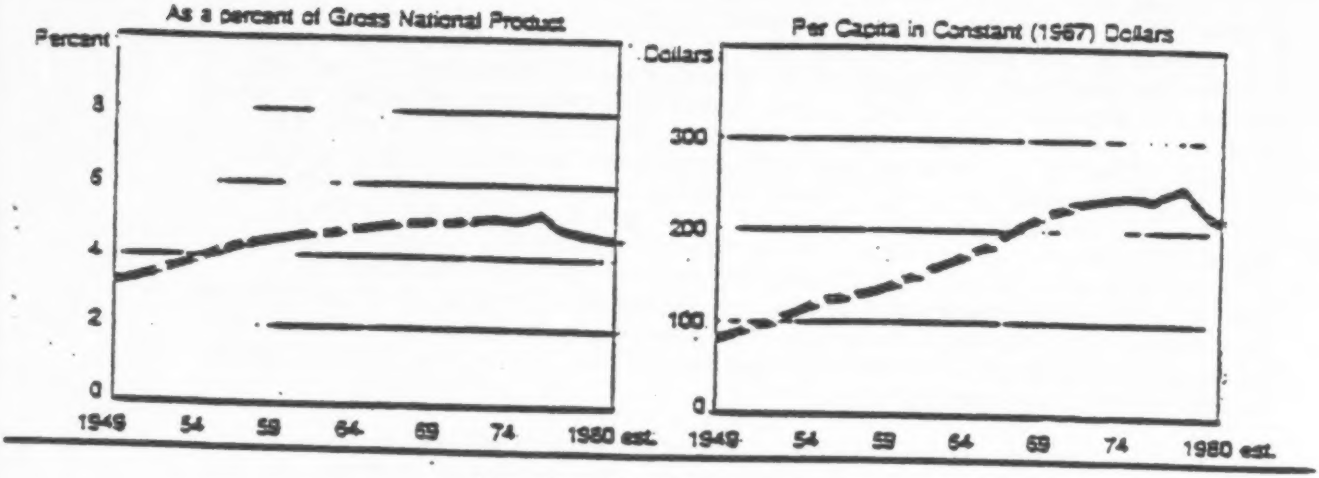
Cost Estimates

A national cost estimate for wastewater treatment expenses is difficult to obtain because no direct, unambiguous source of data exists. The variety of local governments in the United States--possessing different fiscal systems and operating under a diversity of State laws--means that the financial mechanisms for raising and spending funds for water pollution control also vary greatly. In addition, the scope of pollution control activities presents many definitional problems, especially when one attempts to compare such expenditures with the means of their financing.

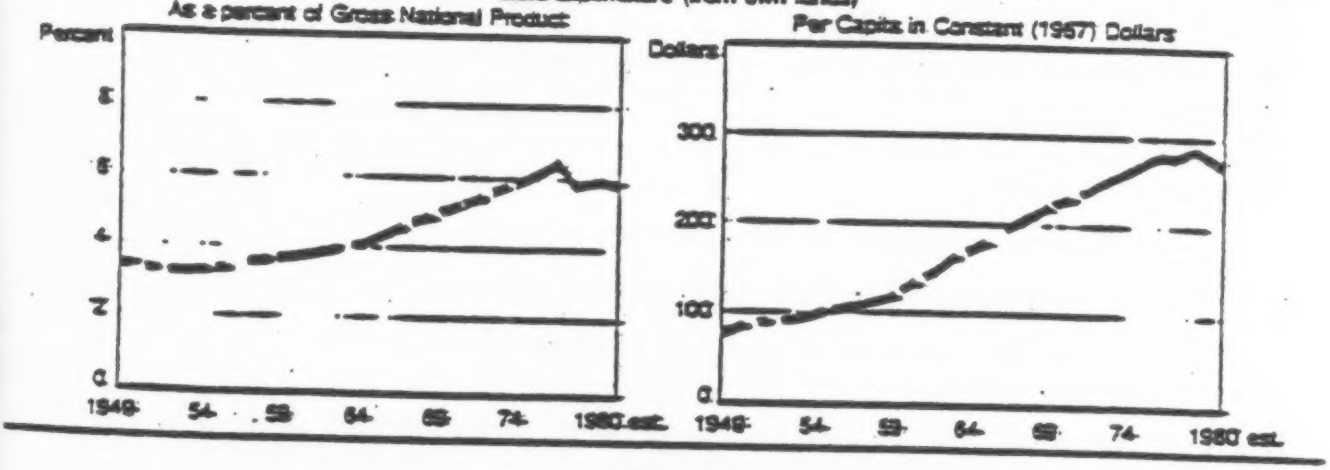
Acknowledging difficulties in measurement, 1980 Needs Survey estimates of the local share of sewage treatment costs (capital and O&M) suggest that 1980 expenditures were in the $4-5 billion range, exclusive of debt service. Debt service costs would add approximately $1-1.5 billion to the total.

STATE AND LOCAL GOVERNMENT EXPENDITURE, AND FEDERAL AID,
SELECTED FISCAL YEARS 1949-80
(State-Local Spending Slowdown)

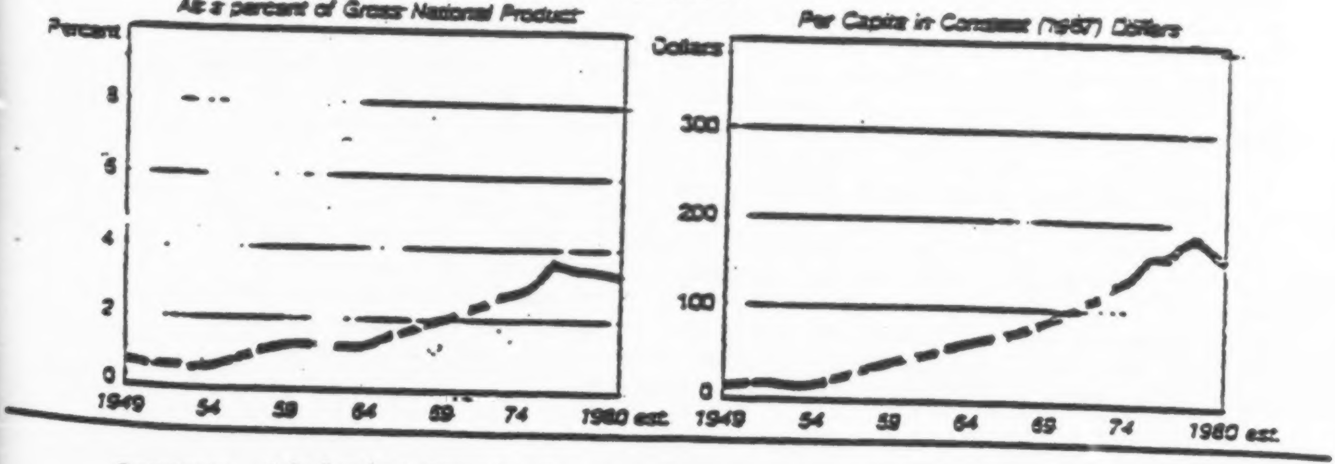
Local Expenditure (from own funds)



State Expenditure (from own funds)



Federal Aid



Source: Advisory Commission on Intergovernmental Relations
Significant Features of Fiscal Federalism: 1979-1980 Edition
Draft (August, 1980) p.3

In addition, total direct expenditures for sewerage (including Federal grants) have increased rapidly in recent years. According to data from the U.S. Bureau of the Census for the 1967 to 1977 period, total direct expenditures for sewerage increased at an annual rate of more than 15 percent. During the same period, direct expenditures for sewerage increased to become more than 5 percent of all local government costs (excluding school districts). Similarly, sewerage expenditures became an increasingly large portion of national personal income, growing from 0.25 percent of income in 1967 to 0.45 percent by 1977. Much of this growth was fueled by large amounts of Federal assistance. While Federal aid of all types to local government grew at a rate of 25 percent per year between 1967 and 1977, Federal aid to the sewerage function increased at the rate of 47 percent per year during this period. As a result, Federal aid to local governments for the sewerage function rose from 4.7 percent of all such Federal assistance in 1967 to 24.5 percent by 1977.

Projections of future sewerage costs vary widely depending upon assumptions regarding Federal funding levels, the nature of technology applied, population growth, and the impact of enforcement on construction. All projections are in agreement, however, that significant increases in sewerage costs will be forthcoming. A conservative estimate has been developed using a projection model with a data base from Census Bureau reports of local sewerage expenditures. This model, which assumes a constant level of Federal funding throughout the 1980's, points to the following real (constant dollar) increases during the period 1978 to 1990:

- An 88 percent increase in total sewerage costs,
- A 68 percent increase in per capita costs, and
- A 150 percent increase in the State and local share of total sewerage costs.

These numbers do not include possible increases in future interest payments on debt. Since the model indicates that there will be strong pressure for increased local borrowing, the expected expenditure increases will probably be higher than those cited here. It should also be noted that expenditure increases in this model were calculated in constant 1978 dollars, and do not reflect possible cost increases due to inflation. For example, if sewerage expenditures were subject to 8 percent inflation during this period, the 1990 costs would be roughly two and one-half times higher than the above.

Many regions, States, and communities can expect increases much higher than the national average. The model forecasts, for example, that real per capita costs will increase 100 percent or more by 1990 in Regions I and X, and that several States can expect sewerage expenditures as a portion of personal income to more than double by 1990. The model does not provide information regarding impacts on particular communities, but other evidence suggests that small communities and older urban areas are likely to be especially prone to financial capability problems.

Small Communities

The financial problems facing small communities affect a large segment of the population. According to the 1970 Census, 38 percent of the population resides in communities under 10,000, and nearly one-fourth of the population lives in communities smaller than 2,500. According to the 1980 Needs Survey, only 8 percent of the population resides in communities of less than 3,500 outside of SMSAs (Standard Metropolitan Statistical Areas), but 16 percent of the remaining sewage treatment needs are in these communities. Interim Census reports also indicate that during the first half of the 1970's, nonmetropolitan counties experienced greater population increases than metropolitan counties. Historically, nearly two-thirds of Construction Grant awards have been to communities of less than 10,000. Nationally, nearly 90 percent of all communities have populations below this number.

The financial issues facing small communities are a result of (1) the limited availability of financial resources, (2) high per capita costs for sewering small, dispersed populations, and (3) limited financial management capabilities. While the conclusions reached here do not apply to all small communities, available statistical and case study analyses indicate that wastewater treatment costs present a particular financial strain for many small communities. An analysis of approved user charge systems in EPA Region V indicates that more than 25 percent of small communities could expect annual costs per household (based on 100,000 gallons) to be more than $200, while less than 5 percent of communities above 10,000 population could expect charges this high.

1. Availability of financial resources

Household incomes in small communities are generally lower than those in large communities, and governmental per capita revenues are also smaller. As a result, small communities have a smaller resource base from which to draw when faced with the need for financing and maintaining a sewage treatment system. The lower per capita revenues found in small communities do not indicate an untapped potential for tax increases. Smaller communities have roughly the same proportion of personal income going to local taxes as do larger communities.

Also, since 1978, small communities' governmental expenditures have risen significantly faster than revenues. The results of a 1980 study by the Joint Economic Committee of Congress show that the rate of expenditure increases exceeds the rate of revenue increases in cities of all sizes, but is greatest (nearly 5 percent) in smaller towns. The increasing gap between revenues and expenditures, especially common in small communities, might be caused by a number of factors, ranging from poor financial management to accelerated population growth. The net inmigration experienced in small towns in recent years is likely to bring with it increased demands for public services that exceed the new sources of revenue.

Small communities desiring to finance the local share of construction costs will find themselves at a disadvantage when attempting to enter the bond market. The impediments to bond financing include the following:

- Inadequate financial information and infrequent bond issuance increase uncertainty about risk, and underwriters may refuse to submit bids.

- State constitutional or statutory restrictions often limit the volume of general obligations outstanding. Small communities, with limited assets, have less flexibility in this area.

- State usury ceilings present another problem since small communities typically pay higher interest rates and are more likely to be limited by the ceilings.

- Small bond issues may have access to a limited market at the local rather than national level, making it more difficult to obtain a good rating and favorable interest rates.

Even if a small community is fortunate enough to receive a rating on its bond issue, it is likely to pay higher interest for the same rating than a large community.

2. High cost of sewering small, dispersed populations

The per capita costs for conventional sewage treatment projects are frequently higher in small communities because of their population size and distribution. Although less costly alternative systems may be appropriate in many situations, factors such as lot size, slope of the land, soil conditions, and depth to bedrock and water table limit their applicability. Citizen concern about pollution of drinking water from wells has also been a factor limiting their use.

A major source of the increased per capita costs involved in providing a conventional system to a small population is due to a diseconomy of scale. As with other large projects, the construction, operation, and maintenance of sewage treatment plants have a number of fixed costs which do not significantly decrease as the number of people served decreases. On a per person basis, the costs actually rise. Total per capita costs (capital plus O&M) for activated sludge plants of 1 MGD (population approximately 10,000) and 0.1 MGD (population approximately 1,000) exceed per capita costs for a 10 MGD plant by factors of 1.6 and 2.6, respectively. While one may argue that the activated sludge process is not the most efficient for most small communities, many such plants have been constructed.

Smaller communities also tend to have relatively dispersed populations, increasing the costs for collection. In some rural areas the costs of a conventional collection system have been known to represent more than 80 percent of the total system capital costs. This is primarily due to (1) the greater length of sewer pipe per contributor, (2) the greater problems with grade resulting in more lift stations or excessively deep sewers, (3) criteria which limit the smallest sewer pipe diameter to 8 inches, and (4) the fact that small communities cannot spread their capital costs among larger populations sewered previously.

Financial resource limitations are less significant when the small community takes advantage of a less costly alternative system which is appropriate to its size and density. The use of on-site systems, for example, could result in savings of up to 50 percent compared with the cost of conventional systems. Many people are reluctant to use on-site systems, however, in spite of their low cost and effectiveness, because they perceive a public health threat to the water supply from subsurface disposal. Further, consulting firms, upon which small communities rely, sometimes are reluctant to use alternative systems because of their lack of experience with them and for other reasons.

Even though some public attitudes were formed during a period when the importance of system design, siting, and O&M was not fully recognized, a bias exists, at least in some communities, which has become institutionalized in certain areas of the public and private sector. In recent years, with the support of Congress, EPA has attempted to overcome this bias by stressing consideration of alternative systems in facility planning and promoting a wide range of alternative systems suitable for a variety of small community needs.

3. Limited financial management capability

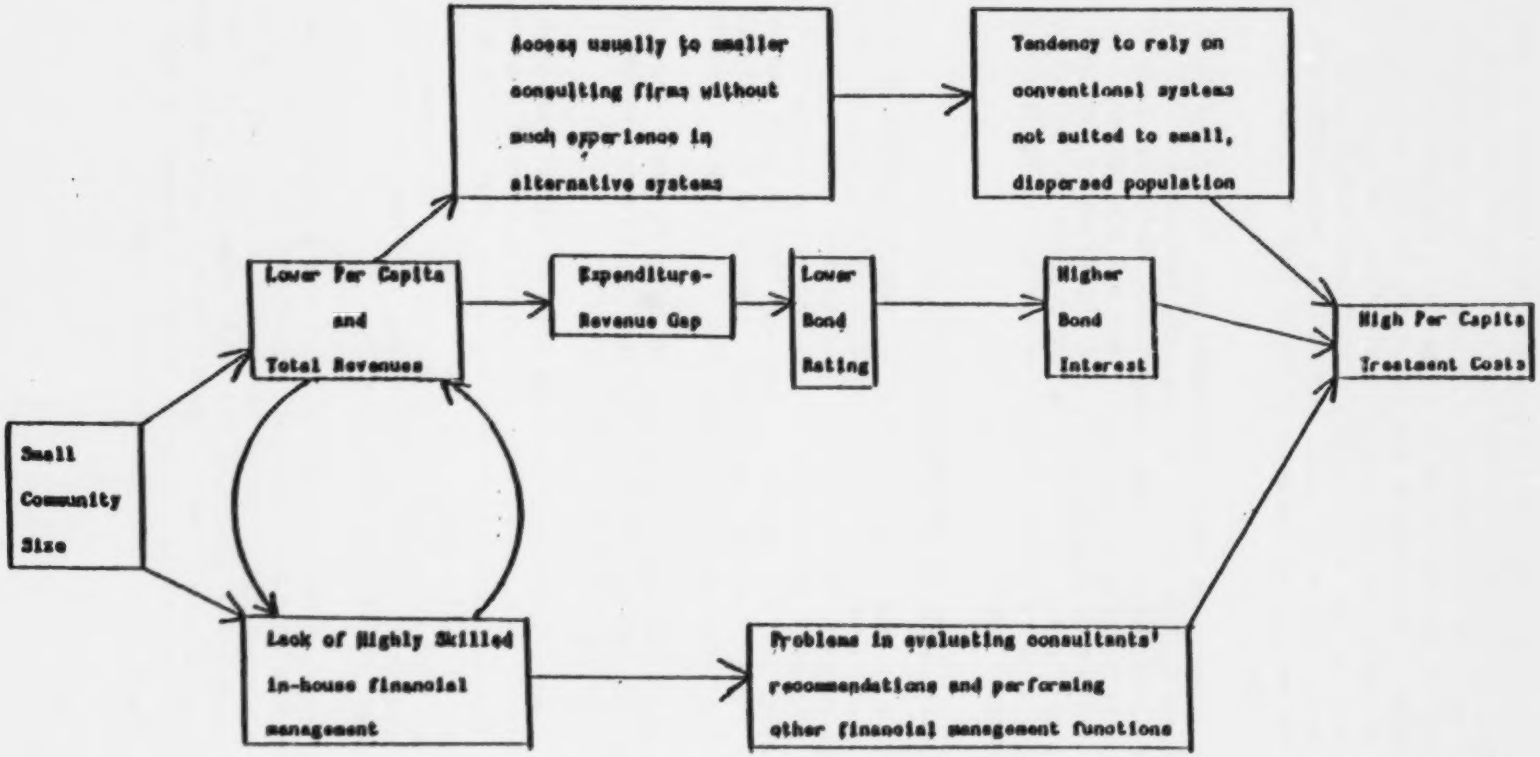
Faced with the financial planning and management of a sewage treatment project, small towns, more so than large cities, may be forced to obtain assistance outside the community, because small towns generally have little need for financial management experts and are unlikely to find them immediately available. The smallest towns may have at most one or two full-time employees whose financial management background is likely to be limited to matters affecting the routine operation of the local community.

The operation and maintenance of POTWs in small towns frequently suffers from financial management deficiencies, as a recent report by the National Demonstration Water Project points out:

> . . . Many small rural systems have no annual management plans or fiscal accounting. There is usually no middle management and inexperienced volunteers may assume what little management responsibilities there are. Work schedules are sporadic, with no policies or procedures governing task performance. Systems are unable to cope with day-to-day problems and the situation becomes one of slow deterioration.

What emerges from the analysis of small community financial problems is a pattern of high per capita cost resulting from a combination of diseconomies of scale and deficiencies in financial resources and financial management. Figure I-4 illustrates the small community predicament. Again, this is not to say that all small communities are subject to these problems, rather to point out the financial pressures brought on many small communities by sewage collection and treatment costs.

FIGURE I-4 FINANCIAL OBSTACLES TO SMALL COMMUNITY PARTICIPATION IN THE CONSTRUCTION GRANTS PROGRAM


Small Community Size
Lower Per Capita and Total Revenues
Lack of Highly Skilled in-house financial management
Access usually to smaller consulting firms without much experience in alternative systems
Tendency to rely on conventional systems not suited to small, dispersed population
Expenditure-Revenue Gap
Lower Bond Rating
Higher Bond Interest
High Per Capita Treatment Costs
Problems in evaluating consultants' recommendations and performing other financial management functions

OLDER URBAN CENTERS

One major problem for many large urban centers is the age of the sewer infrastructure. Many sewers have reached or surpassed the end of their expected life and need to be replaced or rehabilitated. In many areas old combined sewers exacerbate existing treatment problems by causing wet weather overflows. In addition, needs appear to be concentrated in the most financially hard-pressed cities.

Concentration of Rehabilitation and Combined Sewer Overflow Needs

The 1978 EPA Needs Survey indicates that per capita rehabilitation needs within SMSAs ($30 per capita) are 15 times as great as those outside of SMSAs ($2 per capita). According to the survey, these needs are particularly great in Baltimore, Maryland, New York City, and older Northeastern cities generally.

The Needs Survey underestimates rehabilitation needs, however. EPA accepted needs for major sewer rehabilitation areas only when they could be documented by facility plans or engineering studies. Large additional undocumented needs undoubtedly exist in many areas. For example, the 1978 survey indicates no rehabilitation needs for Buffalo, Cincinnati, Cleveland, Hartford, Newark, or Pittsburgh, but in response to an Urban Institute study inquiry, local officials in these cities estimated their needs to be in the hundreds of millions of dollars. Under current Needs Survey methodology, the Baltimore and New York City rehabilitation needs constitute 85 percent of the national total.

Combined sewer overflow (CSO) needs are also concentrated in urban centers, with 40 percent of 1978 Needs Survey estimates in Region V (the Midwest) and an additional 44 percent in Regions I, II, and III (New England, the Northeast, and Central Atlantic States). For the Needs Survey, CSO needs are estimated using a computer simulation model. Actual costs are possibly much greater.

Infrastructure needs, as measured by rehabilitation, infiltration/-inflow, and CSO needs, are concentrated in cities in the Northeast and Midwest, as indicated by Table I-25 adopted from a study of 28 cities conducted by the Urban Institute.

TABLE I-25. BIG CITY PER CAPITA INFRASTRUCTURE NEEDS BY REGION

Region	Category III	Categories III & V
NE	$64	$265
MW	$61	$268
S	$187/12*	$243/75*
W	$38	$149

*Including Baltimore/not including Baltimore.

Source: Humphrey and Wilson, "Capital Stock Condition in 28 Cities," Urban Institute, February 15, 1980.

Of the cities studied by the Urban Institute, those with the highest per capita category III and V needs included:

Baltimore	$1588
New York	$ 516
Cincinnati	$ 507
Louisville	$ 419
Buffalo	$ 338
Seattle	$ 332
Kansas City	$ 323
Detroit	$ 320
Cleveland	$ 319

Concentration of Needs in Financially Distressed Areas

When high rehabilitation and CSO needs are viewed in the context of the local financial capability to meet system needs, it becomes apparent that infrastructure needs are most concentrated in cities least able to afford the improvements. This is illustrated in Table I-26, based on the work done by the Urban Institute.

TABLE I-26. PER CAPITA NEEDS AND MAINTENANCE SPENDING BY FISCAL CAPACITY CATEGORY

Fiscal Capacity	Category III Needs	Category III and V Needs	Change in Maintenance Spending 1975-1978
Weak	76	309	-8%
Moderate	138/17*	260/149*	22%
Strong	23	148	3%

*Including/not including Baltimore, a city on the margin between weak and moderate capacity.

Source: Humphrey and Wilson, "Capital Stock Condition in 28 Cities," Urban Institute, February 15, 1980.

The measure of fiscal capacity used was based on both the absolute level and rate of growth of a city's revenue base--retail sales, personal income levels, and market value of property measured on a per capita basis. Furthermore, the Urban Institute study indicated that the fiscally weakest cities have generally cut back more in maintenance spending and the level of maintenance performed than communities more financially secure.

Reliance of Large Cities on Federal Aid

Large cities have generally been more reliant than small cities on Federal aid for capital expenditures. According to a 1980 study by the Joint Economic Committee, 36.4 percent of the general government capital outlays of cities over 250,000 population during the period 1978 to 1980 was expected to be from Federal aid. For New York City, which was not included in the Joint Economic Committee study, Federal aid was expected to comprise 44 percent of capital expenditure funds. To the extent that Federal funding does not keep pace with local expenditure demands, large cities dependent on Federal aid may have major difficulties in constructing and maintaining major sewage treatment systems.

Sewage Treatment Costs and Local Borrowing Capacity

The anticipated growth in national sewage treatment costs will no doubt be reflected in borrowing capacity problems at the local level. In 1978, the Municipal Finance Officers Association conducted for EPA a study which attempted to develop several indicators of local credit capacity and evaluate the potential impact on credit markets of borrowing for treatment works construction under varying assumptions of expenditure levels. While this study did not identify a specific proportion of communities which might anticipate borrowing problems, it did point to substantial credit pressures under some assumptions, particularly in some regions of the country.

The only available study that attempts to estimate the proportion of projects which might strain the credit capacity of local governments is an assessment of communities in New York State (excluding New York City) by the consulting firm of Booz, Allen and Hamilton. This study, conducted in 1978, matched local financial capability against local funding requirements based on projects on the FY 1978 priority list and the 1979-1981 construction grants list. Municipal financing capacity for the 346 local governments in the study was assessed in terms of standard measures such as the incremental increase in per capita debt. As a result of this analysis, 36 percent of the communities were judged to have inadequate financial capacity, defined as "a high likelihood of being excluded from the borrowing market." An additional 8 percent were classified as having marginal financial capacity, defined as "financing of local share likely to cause lowering of bond rating." Financial capacity problems were found most frequently in small communities.

Since this is the only known study of this type to involve a substantial sample of communities, one should perhaps not place great confidence in the calculated percentage of communities expected to face financial difficulties. The New York State situation, for example, may not be typical of the national picture. The message is clear, however, that a significant proportion of communities may face borrowing difficulties. For the 89 municipalities in the "inadequate capacity" category in the New York study, the problems appear to be severe. Thirty-one of the communities carry the lowest investment-grade bond funds in the municipal bond market. Of the 58 "inadequate capacity" communities without bond ratings, 32 face tax increases greater than 30 percent, and a few face doubling of taxes.

Industrial Cost Exclusion and Local Financial Capability

If the increased local share of construction costs due to ICE can be passed through directly to industrial users, then the long-term direct cost impacts of ICE to local communities should be minor. Under some conditions, however, the additional construction costs cannot be directly passed through to industry and some costs will accrue to local communities. The following sections focus on three conditions that might lead to increased costs for local communities. The conditions and their potential cost impacts are indicated in Table I-27.

TABLE I-27. POTENTIAL COST IMPACTS OF ICE ON POTWs

	Condition	Potential Impact
1.	Industry construction cost subsidized by local community	Inability to borrow funds or high debt service costs
2.	Industry self-treats	Loss of economy of scale
3.	Industry shuts down or decreases production	Loss of jobs and decline in tax base

The Impact of ICE on Local Borrowing Capacity

In some instances, industrial users may be unwilling or unable to either self-treat or to raise capital for construction, and the local community will try to subsidize some portion of the industrial share. This situation may occur where the lack of available land prevents self-treatment and where full funding of the industrial portion of a joint treatment facility is not possible for the industry.

For many communities contemplating a construction subsidy for industrial flow, the impact of such a subsidy on funding requirements would be prohibitive. Data provided in a previous section on affected communities indicated that more than 400 communities will face near-term impacts, and that funding requirements would exceed $400 per household for 20 percent of the communities. The greatest impacts were found in small communities and in a few large communities, thus reinforcing the already existing pattern of financial strain.

An analysis of data from the 1980 Needs Survey provides an estimate of the long-term effects of the ICE provisions. These data, summarized in Table I-28, indicate the future costs for needed facilities (treatment plants and interceptors) which have significant industrial flows, that is, over 100,000 gallons per day and 16 percent or more of the total POTW flow. More than 1,300 facilities, with a total cost of more than $16.3 billion, may be affected. The industrial flow component of this amount, which will no longer be grant eligible, is $3.5 billion. The additional incremental cost to be raised locally is 75 percent of the industrial portion, or $2.6 billion. This represents a 63 percent increase over the current estimated local share of $4.1 billion (25 percent of the total cost of 16.3 billion).

A majority (55 percent) of the affected communities will be small communities with populations of 10,000 or less. While these small communities account for only 5 percent of the flow from affected communities, they include 16 percent of the industrial cost. The approximate average treatment need for communities in this category is $2.8 million, with an industrial share of 26.6 percent, or $745,000. Prior to ICE, the typical local share would have been $0.7 million, with a Federal share of $2.1 million. Under ICE, the typical local share would be $1.25 million, with a Federal share of $1.55 million. This represents an 80 percent increase over the current local share. These figures represent the average impact of this affected group, and the actual impact will vary from community to community.

It is not possible to determine how many of these significantly affected communities will eventually consider the option of subsidizing capacity for industrial flows, nor is it feasible to conduct a case-by-case analysis of local financial capability. However, the incremental size of the cost impacts, particularly for small communities, suggests that for many, if not most, of these communities, such a subsidy is not a feasible alternative.

TABLE I-28. LONG-TERM NEEDS IN COMMUNITIES WITH SIGNIFICANT INDUSTRIAL FLOWS*

Size of Community	Number of Communities	Total Cost ($ Million)	Industrial Cost ($ Million)	Total Flow (MGD)	Industrial Flow (MGD)
SMALL (10,000 or less	764 (55%)	2,136 (13%)	569 (16%)	571 (6.2%)	152 (6.4%)
OTHER	618 (45%)	14,203 (87%)	2,968 (84%)	10,439 (94.8%)	2,232 (93.6%)
TOTAL	1,382	16,339	3,538	11,010	2,384

*For this data base, communities with significant industrial flows are those which have industrial flows greater than 100,000 gallons per day and 16 percent of total flow.

The Potential Impact of ICE on Savings from Economy of Scale in Construction and Treatment

Since the industrial flow portion of treatment works will not be grant eligible, many industries will determine that self-treatment is more cost-effective than joint treatment. Where industries choose to self-treat, the cost advantages due to economy of scale in both construction and operation and maintenance will be lost to local communities. This impact will be greatest in smaller communities where the effects of economy of scale are most noticeable, and where individual industrial users might amount to a significant percentage of the total flow.

In some cases, however, joint treatment does not result in a cost savings to communities. For example, some communities, in order to accommodate an industrial discharger, may select treatment technologies that would not otherwise be used because they are too expensive or unnecessary for a treatment system designed only for domestic waste. In a previous ICR report, EPA cited the example of a small community in Iowa which had to upgrade its simple, non-aerated lagoon system to a more expensive, energy-intensive system in order to accommodate the loadings from a sausage plant.

Special design considerations to accommodate industrial flows may not be uncommon in small communities or in areas where industry is located far from the municipal facility. A lagoon system, relatively inexpensive to construct and maintain, would often be the best choice for a small community. In order to provide capacity for industrial use, however, a small community may be required to select and share costs for a more sophisticated system which is more costly to construct and operate.

Another consideration is that some industrial users are primarily seasonal users, and joint treatment plants must be designed for a capacity that is unused much of the year. The higher costs for operating an underutilized plant during the off-season may more than offset the cost savings from economy of scale.

Industrial withdrawal from a municipal treatment system could also prove costly to a community. Existing regulations do not require industrial users to sign binding legal documents commiting themselves to long-term financial obligations for wastewater treatment services. Any number of factors such as changing business conditions, increased user charges, new production processes, or the availability of less expensive treatment elsewhere may result in a decision by an industrial user to discontinue or severely cut back use of a municipal system. When this occurs, the local community will be left with overdesigned, and therefore inefficient, facilities as well as a capital cost obligation. Again, the economic impact will be greatest for small communities which built treatment systems that included a significant amount of capacity for industrial use.

Joint treatment also requires more sophisticated work by a municipality in planning, monitoring, and allocating costs. Planning requires identifying industrial dischargers and determining their treatment needs. Determining which industrial facilities will actually use a POTW can be difficult because industries may be unwilling to commit themselves until their costs are identified. Furthermore, treatment needs for potential industrial users must be determined based upon a characterization of industry's pollutant loadings. Information on the industrial waste stream is needed to ensure compliance with sewer use ordinance and pretreatment programs. Gaining full information on these matters is a complex undertaking, and, in some cases, uncertainty regarding industrial treatment needs causes municipalities to overdesign as a hedge against miscalculation. Further, EPA-sponsored studies of treatment plants in violation of permit limits have found that the strength and volume of industrial flows often have been a significant factor in noncompliance. User charge requirements, sewer use ordinances, and pretreatment programs require programs for intensive monitoring of industrial users, and these costs may be significant for some communities.

Secondary Impacts of ICE on Community Employment and Economic Base

Some communities have expressed concern that implementation of industrial cost exclusion will cause industries to shut down or relocate, resulting in local unemployment and economic distress. For example, a marginal firm may have no choice but to use a publicly subsidized municipal facility if it is to continue operating. It may not be able to borrow money in the capital markets for its share of POTW costs nor have enough internally generated funds for a self-treatment facility. If the community is not able to subsidize the industrial share of construction costs, the firm may have no alternative but to close down. In other cases, a firm facing high costs for using a POTW or self-treatment in a community may choose to relocate or shift production to a community which offers lower treatment costs.

The probable incidence of plant closings, relocations, or production shifts is impossible to predict. This is a plant-by-plant business decision based on each firm's assessment of the option which offers the least total cost for complying with pollution control requirements and the most efficient use of available capital. The decision will be affected by the cost of borrowing money, the availability of land and capital for self-treatment, the costs for using the proposed POTW, and the availability of less costly alternatives in other communities.

There are some factors which suggest that small communities might be the most susceptible to the loss of industrial jobs. Small communities, if they have affected industries, are more likely to have individual industrial users that constitute a substantial percentage of total usage. Because the industrial users would constitute a substantial portion of design capacity, the community would need the industrial users either to prefinance their industrial capacity or to commit themselves to a legally binding, long-term financial obligation for sewer services. Most small communities do not have the economic base necessary to subsidize the industrial share. In contrast, large urban communities, where individual industrial users comprise only a small percentage of total usage, can afford to permit industries to use municipal facilities without requiring binding financial arrangements to secure long-term payments for industrial capacity. Since many large industries may not be able or willing to make long-term financial commitments for wastewater treatment, some will consider moving or shifting production to metropolitan areas in search of flexibility in arrangements. As a result, there would be a worsening of unemployment problems and related economic conditions in some small communities.

On the other hand, some economic consequences of ICE may make small communities or rural areas more attractive to industrial dischargers. Industries located in large urban areas may find that self-treatment is not a realistic option because of the unavailability or high cost of land for treatment facilities. If costs for using the POTW are high, industries may be tempted to leave urban areas for new facilities in rural areas or small communities where cheaper, independent treatment is possible.

Regardless of the potential impacts of ICE on communities of various sizes, one long-range effect may be to magnify differences between communities in terms of their ability to appeal to industry through the availability of moderately priced wastewater treatment. Communities which will be operating facilities with industrial capacity funded by the grants program will have an economic advantage over remaining communities. Of the remaining communities, those that are willing and able to subsidize industrial capacity will have an advantage over the rest. One probable result is that economically distressed communities will be disadvantaged in the competition for industry by their inability to subsidize construction for industrial capacity.

OTHER ISSUES

In response to the Congressional directive, this chapter on the municipal perspective has focused on potential economic impacts of ICE and on the financial capability of communities to construct POTWs. Community responses to EPA have raised a number of additional issues, however, and these additional issues are identified here in order to provide a more comprehensive report on community concerns.

Issue Number 1: Inequities Between Communities. A number of municipalities felt that application of existing deadlines for industrial flow eligibility would create inequities between communities with some able to offer low-cost treatment to industry while others could not. This was a particular concern to communities that felt that they would miss the deadline for eligibility because of slow processing of facility plan approvals by EPA or State offices.

Another concern was that the 50,000 gallons/day (sanitary equivalent) cut-off would affect communities unequally. For example, under the ICE provisions, a community with many small industries, each with flow under 50,000 gallons/day, could receive funding for all of its industrial flow, while another community with only one industry, but above the 50,000 gallons/day limit, would not receive funding for its industrial flow, even though the total industrial flow in the second community was smaller.

Issue Number 2: Retroactivity. Many communities that were far along in Step 1 planning but unable to meet the eligibility deadlines commented that they should not be required to revise work already completed. One community compared the application of ICE to communities nearly finished with planning to "changing the rules in the bottom of the eighth inning." Several communities suggested that the date for cutting off eligibility be revised to provide eligibility for those nearly finished with planning.

Issue Number 3: Inequities Between Industries. Some communities were concerned that the 50,000 gallons/day limit would require them to treat their industrial users inequitably. They felt that might be faced with charging industrial users widely different rates when the only difference between them was amount of flow. Other communities were concerned that some industries would have relatively low rates because they would use previously completed facilities while newer industries in "development" areas would be facing higher rates or self-treatment costs.

II. INDUSTRIAL PERSPECTIVE

The effect of the Industrial Cost Exclusion on industrial participation in publicly owned treatment works and the treatment of industrial discharges.

II. INDUSTRIAL PERSPECTIVE

INTRODUCTION

Compliance with industrial wastewater treatment requirements can be achieved in two ways: self-treatment or use of a POTW. The decision to use a POTW or to self-treat is based on numerous factors, many of which are different for each industrial discharger, and some of which cannot be easily measured in economic terms. For this analysis, the factors weighed in each case are divided into three categories: direct economic, indirect economic, and non-economic.

WASTEWATER TREATMENT OPTIONS

After the ICE requirement becomes effective, six basic wastewater treatment options will be available to industrial dischargers of process wastewater:

1. Self-treatment. Under this option, the industrial discharger plans, constructs, and operates its own wastewater treatment facility.

2. Treatment in a jointly owned POTW. Under this option, the municipality plans, constructs, and operates a POTW that is jointly owned and jointly financed by the municipality and the industrial user(s). The portion of the POTW owned and financed by the industrial user(s) is proportionate to each industrial user's share of the POTW's design flow and pollutant loading.

3. Treatment in a jointly financed POTW. Under this option, the municipality plans, constructs, and operates a POTW that is fully owned by the municipality, but whose construction cost is jointly financed by the municipality and the industrial user(s). The portion of the POTW financed by the industrial user(s) is proportionate to each industrial user's share of the POTW's design flow and pollutant loading.

4. Treatment in a POTW under a binding contract. Under this option, the municipality plans, constructs, and operates a POTW that is fully owned and fully financed by the municipality, with each industrial user required to sign a contract with the municipality, specifying the length of time that the industrial user intends to use the POTW, and establishing each industrial user's obligation to pay for capacity constructed for treatment of industrial process wastewater. This contractual provision ensures that the municipality receives sufficient revenue to meet its debt service obligations, even if an industrial user reduces or eliminates its use of the POTW. Such a provision is similar to a long-term lease, which is commonly used in commercial practice.

5. Treatment in a POTW without a binding contract. Under this option, the municipality plans, constructs, and operates a POTW that is fully owned and fully financed by the municipality, with each industrial user required to pay its share of the municipality's debt service obligations. The industrial share of the debt service obligations is based on each industrial user's actual use of the POTW, with no obligation to pay for capacity constructed for, but not used by, the industrial user. Such a provision is similar to the previous ICR requirement, except that payments include 100 percent (instead of 75 percent) of the cost of constructing capacity to treat industrial process wastewater, payments include an interest component, and all funds collected are retained by the municipality.

6. Treatment in a POTW with debt service based on ad valorem taxes. Under this option, the municipality plans, constructs, and operates a POTW that is fully owned and fully financed by the municipality, with the municipality's debt service obligations being paid from ad valorem tax revenues. Such a provision is similar to the present situation, except that all users, including the industrial users, pay additional ad valorem taxes for debt service on the 75 percent of the industrial share of the construction costs which were formerly paid by EPA grant assistance.

The choice of Options 2 through 6 is not up to the industrial discharger alone. The municipality must agree to the industrial discharger's choice and, in the case of Options 4 through 6, must also be able to sell bonds to raise the necessary capital. The use of Option 6 might be further restricted in some instances by State limitations on the sale of general obligation bonds. The basic characteristics of each option are summarized in Table II-1.

DIRECT ECONOMIC FACTORS

In analyzing the wastewater treatment options available, the most basic comparison is on direct economic factors: the total cost, on a present value basis, of each option. The initial and annual cost components for each option are summarized in Table II-2 and discussed below:

1. Self-treatment. Initial costs include purchasing additional land (where required), securing zoning changes and building permits, planning and constructing the treatment facility and wastewater outfall, developing and constructing a sludge disposal system, securing permits required by the National Pollutant Discharge Elimination System (NPDES) and the Resource Conservation and Recovery Act (RCRA), and purchasing and installing monitoring systems required by those permits. Annual costs include salaries and training for operation and maintenance personnel, energy, chemicals, insurance, property taxes, and debt service on funds borrowed. These annual costs are incurred for the operation of the treatment facility, the sludge disposal system, and the monitoring system.

TABLE II-1. OPTIONS FOR TREATMENT OF INDUSTRIAL PROCESS WASTEWATER

Option	Description	Ownership*	Financing*	Cost to Discharger after Shutdown
1	Self-treatment	Corporate	Corporate	Debt service on corporate debt
2	Jointly-owned POTW	Corporate	Corporate	Debt service on corporate debt
3	Jointly-financed POTW	Municipal	Corporate	Debt service on corporate debt
4	POTW with binding contract	Municipal	Municipal	Debt service on municipal debt*
5	POTW without binding contract	Municipal	Municipal	None
6	POTW with debt service based on ad valorem taxes	Municipal	Municipal	Ad valorem taxes on corporate property

*Refers only to that portion of POTW capacity constructed to treat industrial process wastewater.

TABLE II-2. DISTINGUISHING COST CHARACTERISTICS FOR TREATMENT OPTIONS

Option	Description	Initial Costs	Annual Costs
1	Self-treatment	Land; outfall; permits; bond sales	Salaries; energy; chemicals; property taxes; debt service
2	Jointly owned POTW	Interceptors; pretreatment; bond sales	User charges; property taxes; debt service*
3	Jointly financed POTW	Interceptors; pretreatment; bond sales	User charges; no tax incentives; debt service*
4	POTW with binding contract	Interceptors; pretreatment; hookup/connection charges	User charges; no tax incentives; debt service*
5	POTW without binding contract	Interceptors; pretreatment; hookup/connection charges	User charges; no tax incentives; debt service*
6	POTW with debt service based on ad valorem taxes	Interceptors; pretreatment; hookup/connection charges	User charges; no tax incentives; partial debt service through property taxes*

*If pretreatment is required, additional annual costs will be incurred for salaries, energy, chemicals, property taxes, and debt service.

2. Treatment in a jointly owned POTW. Initial costs are the same as those for Option 1, except that land acquisition is facilitated by the municipality's power of eminent domain, zoning permits and building permits either are normally not required or are more easily obtained, and the economies of scale reduce the other initial costs somewhat. However, additional initial costs are incurred for planning and constructing interceptors to convey the industrial wastewater to the POTW; for constructing additional POTW capacity to treat extraneous flows (infiltration/inflow), peak flows (domestic flows are much more variable than are industrial flows), and future flow increases (mainly from additional users); and for such administrative requirements as developing user charge systems and sewer use ordinances. In addition, industrial users discharging "incompatible" pollutants incur initial costs for planning and constructing pretreatment facilities. Annual costs are the same as those for Option 1, with some reduction through economies of scale. There are, however, increases in annual costs due to the cost of treating wastewater that has a lower strength and more variable flow and pollutant loadings, the cost of treating extraneous flows, pumping costs, and administrative costs such as meter reading and billing procedures. Also, if the initial costs are higher or lower than those for Option 1, debt service payments are accordingly increased or decreased. Industrial users discharging "incompatible" pollutants incur additional annual costs identical in nature to those for Option 1, although of a lesser amount, for the operation of both the pretreatment facility and its sludge disposal system.

3. Treatment in a jointly financed POTW. Initial costs are identical to those for Option 2. Annual costs are also identical to those for Option 2, except that no property taxes are paid for the POTW. (Property taxes are still paid for any pretreatment facility.)

4. Treatment in a POTW under a binding contract. There are no initial costs, except that the municipality might collect hookup and/or connection charges. Hookup charges constitute a partial recovery of the capital cost of the POTW, and connection charges cover the cost of inspection, meter installation, and administrative services associated with each new connection. Annual costs are identical to those for Option 3, except that direct debt service payments to holders of the debt of the industrial user are replaced by debt service payments to the municipality to cover municipal debt service obligations. These may be higher or lower than direct debt service payments, depending on interest rates and maturity dates.

5. Treatment in a POTW without a binding contract. Initial costs are identical to those for Option 4. Annual costs are also identical to those for Option 4, except that they are reduced or eliminated if an industrial user reduces or eliminates its use of the POTW.

6. Treatment in a POTW with debt service based on ad valorem taxes. Initial costs are identical to those for Option 4. Annual costs are also identical to those for Option 4, except that debt service payments are proportionate to each industrial user's share of the total assessed valuation of properties served by the POTW, rather than being based on the total cost of ICE. This is the only option under which the cost of ICE is shared by all users of the POTW, rather than being borne solely by the industrial users.

To some extent, the initial costs to industries under Options 1 and 2 can be offset by two important Federal tax incentives for pollution control investments, both of which are mandated by the Internal Revenue Code.

The earlier tax incentive for private investment in pollution control facilities dates from 1968. In that year, Congress restricted the use of industrial development bonds (IDBs), the interest on which is tax exempt, but made limited exceptions for their continued use in financing certain business investments, one of which was the construction of pollution control facilities. IDBs are bonds issued by a State or local government, the proceeds from which are used to construct and equip privately owned industrial plants. Unlike normal bond issues of State and local governments that are secured as to principal and interest by the full faith and credit of the issuing government, IDBs are secured only by the rentals the "lessee" private firm has agreed to pay. For tax purposes, the facilities so constructed are considered the property of the private firm since, after termination of the "lease" agreement under which the bonds have been retired, ownership of the property remains with the "lessee." These facilities are therefore eligible for the tax incentives provided for private investment in such facilities, including the investment tax credit, if qualified, and depreciation deductions. For financial reporting, the IDBs are regarded as obligations of the "lessee" corporation. In effect, tax-exempt bonds issued through the agency of a State or local government are used to finance private property at an interest saving of 30 to 35 percent to the private firm. This incentive for financing pollution control facilities has been liberally used by many industrial dischargers to help pay for pollution control facilities.

The second tax incentive for investment in pollution control facilities was enacted in 1969. Under this provision, as amended in 1975 and 1978, pollution control facilities installed in industrial plants in existence on December 31, 1975, and certified as necessary to bring those plants into compliance with regulations under the Clean Air and Clean Water Acts, may be amortized over five years and still qualify for the full 10 percent investment tax credit. However, if the property for which five-year amortization has been elected in lieu of depreciation is also financed by IDBs, the investment tax credit is limited to 5 percent.

Through these incentives the Congress has agreed to share the cost of compliance with environmental regulations. Indeed, at discount rates below 14 percent, the five-year amortization option with the 10 percent investment tax credit is more generous than the current expensing (one-year writeoff, which is not permitted for capital investments) of such expenditures, as demonstrated in Table II-3. This occurs because present law provides for an investment tax credit which is a stipulated portion of the corporation's "basis" in the property when it is acquired (the amount of capital to be recovered as depreciation allowances), while still allowing the depreciation of the full amount of the cost of the property. At discount rates below 14 percent, the after-tax effect of the investment tax credit exceeds the after-tax effect of the difference between expensing the full amount of the expenditures and the present value of the depreciation allowances over the five-year depreciation period.

The five-year amortization incentive applies only to capital outlays to retrofit a pre-1976 plant to bring it into compliance with environmental regulations, while the IDB financing is available for capital outlays specifically for pollution control in both new and old plants. With the passage of time, as fewer retrofit modifications of plants built before 1976 remain to be accomplished, the IDB financing available to new plants will become the principal remaining incentive.

It is difficult to evaluate quantitatively the relative costs for the six options on a national basis, since each industrial discharger operates with its own unique combination of physical and economic circumstances. Such an evaluation is even more difficult with the reluctance of industrial dischargers to disclose financial data on the impact of ICE on their economic status. There are several reasons for this reluctance. First, any indication of impending financial difficulties could result in decreased employee productivity and loss of personnel, especially key personnel. Second, customer perception of possible future instability could result in a loss of business to other corporations. Third, competitors, learning of an adverse situation, might initiate competitive practices such as price reductions to drive the firm out of business or pressure it to sell or merge on unfavorable terms.

Pretreatment costs are especially difficult to quantify on a nationwide basis, because pretreatment requirements vary widely from one industry to another. For instance, food processors, a major source of industrial process wastewater, face no Federal pretreatment requirements since they do not discharge "incompatible" pollutants. (Some food processors face local pretreatment requirements due to limited POTW capacity.) At the other extreme, pretreatment requirements faced by the electroplating and tanning industries are so stringent that little additional treatment (beyond pretreatment) is required for these industries to self-treat. Because such industries would have to undertake substantial capital construction and employ operating personnel for pretreatment alone, many of those that are physically able to do so can be expected to choose self-treatment, which requires only limited additional construction and operating expenses.

As an example, typical wastewater treatment costs for the textile industry are tabulated in Tables II-4 and II-5, based on a 20-year schedule of debt retirement, 100 percent debt financing of capital costs, a 22 percent

TABLE II-3. AFTER-TAX EFFECT OF TAX INCENTIVES FOR POLLUTION CONTROL FACILITIES

	Expensing*	Using Investment Tax Credit and Rapid (Five-Year) Amortization							
Discount Rate	-	8.0%	10.0%	12.0%	14.0%	16.0%	18.0%	20.0%	22.0%
First Year:									
Expensing	46.0%	-	-	-	-	-	-	-	-
Investment Tax Credit	-	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Amortization**	-	9.2%	9.2%	9.2%	9.2%	9.2%	9.2%	9.2%	9.2%
Years Two through Five: Present Value of Amortization	-	30.5%	29.2%	27.9%	26.8%	25.7%	24.7%	23.8%	22.9%
Total	46.0%	49.7%	48.4%	47.1%	46.0%	44.9%	43.9%	43.0%	42.1%

*Not permitted under current tax law for capital investments.
**Only straight-line depreciation is permitted.

TABLE II-4. ANNUAL WASTEWATER TREATMENT COSTS FOR TYPICAL INDUSTRIAL DISCHARGERS IN THE TEXTILE INDUSTRY; IDBs NOT USED; THOUSANDS OF 1979 DOLLARS

Industrial Discharge (MGD)	POTW Capacity (MGD)	Option 1	Option 2 or 3	Option 4 or 5	Option 6	Pretreatment but No ICE		No Pretreatment and No ICE	
			A	A	B	A	B	A	B
0.05	0.50	200	210	200	180	180	180	29	29
0.10	0.50	240	300	270	240	240	240	58	58
0.05	1.00	200	200	190	180	180	180	28	28
0.10	1.00	240	280	260	240	240	240	56	56
0.50	1.00	380	780	670	570	540	530	280	270
0.05	5.00	200	190	180	170	170	170	21	21
0.10	5.00	240	250	240	220	220	220	42	42
0.50	5.00	380	630	550	470	470	460	210	200
1.00	5.00	520	1,100	900	740	740	720	420	400
2.50	5.00	780	2,500	2,000	1,650	1,560	1,510	1,000	950
0.05	10.00	200	180	170	170	170	170	18	18
0.10	10.00	240	240	230	220	220	220	36	36
0.50	10.00	380	580	510	430	440	430	180	170
1.00	10.00	520	960	810	680	680	670	360	350
2.50	10.00	780	2,200	1,800	1,480	1,460	1,420	900	860
5.00	10.00	1,100	4,200	3,500	2,930	2,780	2,710	1,800	1,730
7.50	10.00	1,400	6,100	5,000	4,390	4,000	3,890	2,700	2,590
0.05	50.00	200	170	170	160	160	160	12	12
0.10	50.00	240	220	210	200	200	200	24	24
0.50	50.00	380	480	420	380	380	380	120	120
1.00	50.00	520	750	640	550	560	550	240	230
2.50	50.00	780	1,600	1,400	1,150	1,160	1,140	600	580
5.00	50.00	1,100	3,100	2,600	2,170	2,180	2,140	1,200	1,160
7.50	50.00	1,400	4,500	3,700	3,090	3,100	3,030	1,800	1,730

A - POTW debt service proportionate to flow

B - POTW debt service proportionate to assessed valuation

TABLE II-5. ANNUAL WASTEWATER TREATMENT COSTS FOR TYPICAL INDUSTRIAL DISCHARGERS IN THE TEXTILE INDUSTRY; IDBs USED; THOUSANDS OF 1979 DOLLARS

Industrial Discharge (MGD)	POTW Capacity (MGD)	Option 1	Option 2 or 3	Option 4 or 5	Option 6	Pretreatment but No ICE		No Pretreatment and No ICE	
			A	A	B	A	B	A	B
0.05	0.50	160	180	180	160	160	160	29	29
0.10	0.50	190	240	240	210	210	210	58	58
0.05	1.00	160	170	170	160	160	160	28	28
0.10	1.00	190	230	230	210	210	210	56	56
0.50	1.00	320	630	630	530	510	490	280	270
0.05	5.00	160	160	160	150	150	150	21	21
0.10	5.00	190	210	210	190	190	190	42	42
0.50	5.00	320	510	510	430	420	420	210	200
1.00	5.00	430	860	860	690	670	670	420	400
2.50	5.00	630	1,900	1,900	1,570	1,500	1,430	1,000	950
0.05	10.00	160	150	150	150	150	150	18	18
0.10	10.00	190	200	200	190	190	190	36	36
0.50	10.00	320	470	470	410	400	390	180	170
1.00	10.00	430	760	760	660	630	620	360	350
2.50	10.00	630	1,700	1,700	1,450	1,380	1,340	900	860
5.00	10.00	880	3,200	3,200	2,640	2,490	2,420	1,800	1,730
7.50	10.00	1,200	4,800	4,800	4,020	3,800	3,690	2,700	2,590
0.05	50.00	160	150	150	140	140	140	12	12
0.10	50.00	190	180	180	170	170	170	24	24
0.50	50.00	320	380	380	350	340	340	120	120
1.00	50.00	430	590	590	530	510	500	240	230
2.50	50.00	630	1,300	1,300	1,130	1,080	1,060	600	580
5.00	50.00	880	2,300	2,300	1,190	1,890	1,850	1,200	1,160
7.50	50.00	1,200	3,500	3,500	3,040	2,900	2,830	1,800	1,730

A - POTW debt service proportionate to flow

B - POTW debt service proportionate to assessed valuation corporate borrowing rate, an 11 percent municipal borrowing rate, and average costs for self-treatment, pretreatment, and POTW construction and operation. These average costs are based on cost data for 220 self-treaters in the textile industry, 900 POTW users in the textile industry, and 186 POTWs.

These tables demonstrate that, for the smaller industrial dischargers subject to ICE, the costs of Options 1 through 6 are about equal. Even the repeal of ICE would only decrease the annual cost of using a POTW by about 10 percent. On the other hand, for the larger industrial dischargers, especially those that use 50 percent or more of the POTW capacity, the annual cost of using a POTW can be more than four times the annual cost of self-treatment. For these large dischargers, the repeal of ICE could decrease the annual cost of using a POTW by as much as 35 percent, which would still be more than double the annual cost of self-treatment.

The cost components of each option--user charges, pretreatment costs, the cost of ICE, and possible savings through financing of ICE and the capital costs of pretreatment via IDBs and/or ad valorem taxes--are tabulated in Table II-6, as are self-treatment costs. Table II-7 shows these same costs and cost components as a percentage of the total cost of using a POTW. These tables demonstrate that for small industrial dischargers, the cost of using a POTW consists primarily of pretreatment costs, which can be as high as 88 percent of the total cost. Because economies of scale are realized as larger pretreatment facilities are used, pretreatment costs decrease (as a percentage of total cost) as the size of the industrial discharger increases. For large industrial dischargers, pretreatment costs can be as low as 21 percent of the total cost of using a POTW. User charges and the cost of ICE, comprising the remainder of the cost of using a POTW, are about equal except in small POTWs, where the cost of ICE can be as much as 50 percent higher than the user charges, and in large POTWs, where the user charges can exceed the cost of ICE by more than 10 percent.

Tables II-6 and II-7 also demonstrate that considerable savings could be realized by financing capital costs via IDBs and/or ad valorem taxes. Maximum use of IDBs could save 10 to 26 percent of the total cost of using a POTW, while maximum use of ad valorem taxes to finance the cost of ICE could save 6 to 34 percent of the total cost. The percentages for savings due to use of ad valorem taxes assume only one industrial user per POTW; additional industrial users would reduce the savings, since there would be a higher total cost of ICE, resulting in higher ad valorem taxes being paid by each user. The combined savings which could be realized by the combined use of both IDBs and ad valorem taxes range from 17 to 37 percent. These percentages are lower than the sum of the savings which could be realized by using IDBs and using ad valorem taxes separately, since either IDBs or ad valorem taxes could be used to finance the cost of ICE.

These tables show that self-treatment is a reasonably priced alternative for all sizes of industrial dischargers, and that it would cost less than the total cost of using a POTW for all but the smallest industrial dischargers. For these small dischargers, self-treatment would cost as much as 118 percent of the total cost of using a POTW, whereas self-treatment for

TABLE II-6. ANNUAL WASTEWATER TREATMENT COSTS FOR TYPICAL INDUSTRIAL DISCHARGERS IN THE TEXTILE INDUSTRY, THOUSANDS OF 1979 DOLLARS

Industrial Discharge (MGD)	POTW Capacity (MGD)	Total Cost of Using a POTW*	User Charges	Pre-treatment	ICE	Maximum Saving Through Financing Via			Self-treatment
						IDBs	Ad Valorem Taxes	Total**	
0.05	0.50	210	24	150	35	30	30	50	200
0.10	0.50	300	48	180	70	60	60	90	240
0.05	1.00	200	24	150	28	30	20	40	200
0.10	1.00	280	48	180	56	50	40	70	240
0.50	1.00	780	240	260	280	150	210	250	380
0.05	5.00	190	18	150	19	30	20	40	200
0.10	5.00	250	36	180	38	40	30	60	240
0.50	5.00	630	180	260	190	120	160	200	380
1.00	5.00	1,100	360	320	380	240	360	410	520
2.50	5.00	2,500	900	560	950	600	850	930	780
0.05	10.00	180	16	150	16	30	10	30	200
0.10	10.00	240	32	180	32	40	20	50	240
0.50	10.00	580	160	260	160	110	150	170	380
1.00	10.00	960	320	320	320	200	280	300	520
2.50	10.00	2,200	800	560	800	500	720	750	780
5.00	10.00	4,200	1,600	980	1,600	1,000	1,270	1,560	1,100
7.50	10.00	6,100	2,400	1,300	2,400	1,300	1,710	2,080	1,400
0.05	50.00	170	11	150	10	20	10	30	200
0.10	50.00	220	22	180	20	40	20	50	240
0.50	50.00	480	110	260	100	100	100	130	380
1.00	50.00	750	220	320	200	160	200	220	520
2.50	50.00	1,600	550	560	500	300	450	470	780
5.00	50.00	3,100	1,100	980	1,000	800	930	1,110	1,100
7.50	50.00	4,500	1,650	1,300	1,500	1,000	1,410	1,460	1,400

*Totals may not agree due to rounding

**Less than the sum of savings using IDBs and using ad valorem taxes separately, since either method can be used to finance the cost of ICE

TABLE II-7. ANNUAL WASTEWATER TREATMENT COSTS FOR TYPICAL INDUSTRIAL DISCHARGERS IN THE TEXTILE INDUSTRY, AS A PERCENT OF THE TOTAL COST OF USING A POTW

Industrial Discharge (MGD)	POTW Capacity (MGD)	Total Cost of Using a POTW*	User Charges	Pre-treatment	ICE	Maximum Saving Through Financing Via			Self-treatment
						IDBs	Ad Valorem Taxes	Total**	
0.05	0.50	210	11	71	17	14	14	24	95
0.10	0.50	300	16	60	23	20	20	30	80
0.05	1.00	200	12	75	14	15	10	20	100
0.10	1.00	280	17	64	20	18	14	25	86
0.50	1.00	780	31	33	36	19	27	32	49
0.05	5.00	190	9	79	10	16	11	21	105
0.10	5.00	250	14	72	15	16	12	24	96
0.50	5.00	630	29	41	30	19	25	32	60
1.00	5.00	1,100	33	29	35	22	33	37	47
2.50	5.00	2,500	36	22	38	24	34	37	31
0.05	10.00	180	9	83	9	17	6	17	111
0.10	10.00	240	13	75	13	17	8	21	100
0.50	10.00	580	28	45	28	19	26	29	66
1.00	10.00	960	33	33	33	21	29	31	54
2.50	10.00	2,200	36	25	36	23	33	34	35
5.00	10.00	4,200	38	23	38	24	30	37	26
7.50	10.00	6,100	39	21	39	21	28	34	23
0.05	50.00	170	6	88	6	12	6	18	118
0.10	50.00	220	10	82	9	18	9	23	109
0.50	50.00	480	23	54	21	21	21	27	79
1.00	50.00	750	29	43	27	21	27	29	69
2.50	50.00	1,600	34	35	31	19	28	29	49
5.00	50.00	3,100	35	32	32	26	30	36	35
7.50	50.00	4,500	37	29	33	22	31	32	31

*Thousands of 1979 dollars; totals may not agree due to rounding

**Less than the sum of savings using IDBs and using ad valorem taxes separately, since either method can be used to finance the cost of ICE large industrial dischargers would cost as little as 23 percent of the total cost of using a POTW. These relative costs would be altered in some POTWs through use of IDBs and ad valorem taxes, which can effect savings as high as 37 percent. For small industrial dischargers, the use of IDBs and/or ad valorem taxes could make use of a POTW somewhat less expensive than self-treatment, but for large industrial dischargers, the maximum possible savings would still result in use of a POTW being almost twice as expensive as self-treatment, due to the economies of scale which are realized as larger self-treatment facilities are used.

All figures in Tables II-4 through II-8 are pre-tax costs. For a profitable firm, the after-tax costs would be reduced by the expensing of operating costs, interest payments, user charges, and debt service on municipal debt, and by the combined effect of the investment tax credit and rapid amortization on corporate investments in qualified pollution control property. On a present value basis, as demonstrated in Table II-3, both expensing and the tax incentives for pollution control facilities would reduce the pre-tax costs by the same 46 percent at a discount rate of 14 percent. Even discount rates as low as 8 percent or as high as 22 percent would change this effect by less than 4 percent. Therefore, for a profitable firm, the after-tax costs would be about 46 percent of the pre-tax costs shown in Tables II-4 through II-8, except in the case of Option 3, where the after-tax costs would depend on the tax treatment of the industrial discharger's capital contribution to the construction cost of the POTW. For an unprofitable firm, the after-tax costs would be identical to the pre-tax costs.

INDIRECT ECONOMIC FACTORS

In addition to the direct costs of constructing and operating a self-treatment facility or using a POTW, the choice of a treatment option results in other costs being incurred by each industrial discharger. Although such costs are even more difficult to quantify than direct costs, they generally make use of a POTW more attractive than it would otherwise be, in comparison to self-treatment.

Since an industry that self-treats is fully responsible for the quality of its wastewater discharge, a treatment facility malfunction may require a partial or complete shutdown of the industry's process, causing increased costs and decreased profits. Also, the debt required to finance construction of the treatment facilities may result in a less favorable debt-to-equity ratio, diminishing the attractiveness of the industry's stocks and bonds to future investors. This may require higher dividends and interest rates to sell future new issues of stocks and bonds. In addition, if an industry elects to self-treat, it must divert management attention and engineering expertise away from direct corporate operations (the production and distribution of goods, the source of corporate profits) to tend to the planning, construction, and operation of pollution control facilities. Finally, the operation of a self-treatment facility might generate public ill will, especially among those who live, work, or travel near the facility. This ill will could result in decreased product sales, a lessened ability to attract and retain a productive workforce, or a decreased willingness by the municipality to extend future financial assistance to the industry. Such adverse results could negatively affect corporate profitability, although the effects cannot be quantified.

To the extent that an industrial user choosing to use a POTW would be required to pretreat, the distinction between self-treatment and use of a POTW would be lessened or in some cases eliminated, as far as indirect economic factors are concerned.

NON-ECONOMIC FACTORS

There are a few factors which, when present, have the greatest impact on the decision by an industry to self-treat or to use a POTW. Self-treatment requires land for constructing a pollution abatement system, as well as a waterway that is within a reasonable distance of the industrial facility and that can accept its waste discharge without showing water quality deterioration. If both of these conditions cannot be met, an industry is forced to use a POTW, regardless of the cost.

Use of a POTW requires that a POTW, with the capacity to treat the industrial wastewater, be located within a reasonable distance of the industrial facility. If this condition cannot be met, an industry is forced to self-treat, regardless of the cost.

CONCLUSION

Because of factors such as location and availability of capital, many industrial users have no choice in the method of industrial wastewater treatment to be used. Unless an industrial discharger can secure both land and capital and is located near a waterway that can accept its waste discharge, it must use a POTW. Similarly, unless an industrial user is located within a reasonable distance of a POTW that has the capacity to treat its wastewater, it must self-treat.

Other industrial dischargers meet all of the prerequisites for both alternatives. In such cases, the choice between self-treatment and use of a POTW is based on numerous economic factors, including both the direct costs of construction and operation and indirect costs such as the effect of the treatment method chosen on production processes, the availability of capital, demands on executive and engineering expertise, and the public image of the corporation.

Industrial users of a POTW have several advantages over industries that construct and operate their own treatment facilities. Unless required to pretreat, the industrial user of a POTW is not responsible for treatment system construction, operation, or malfunctions, and is relieved of the responsibility for recruiting and training treatment plant operators, developing programs and purchasing facilities for sludge disposal, and modifying treatment programs to reflect future pollution control requirements, such as more stringent water quality standards.

An industrial discharger that constructs self-treatment facilities must negotiate terms and conditions for a NPDES permit, either directly or through legal and engineering consultants retained for that purpose, and faces enforcement liability amounting to $10,000 per day for violations of NPDES permit effluent limitations. Self-treatment also requires the industry to provide for safe disposal of process sludges in accordance with the provisions of RCRA, which includes its own permit, monitoring, and reporting requirements. The industry must also comply with the provisions of the Safe Drinking Water Act, to ensure that waste is disposed of properly and will not contaminate groundwater supplies. If sludge incineration is used instead of land disposal, the industry must comply with the Clean Air Act and applicable State implementation plans. In nonattainment areas obtaining a permit for incineration is difficult unless emission offsets can be secured. The cumulative burden posed by compliance with all environmental regulations is substantial for an industrial discharger choosing self-treatment, and requires substantial corporate management, financial, legal, and engineering resources.

Because of the above factors, many industrial dischargers in the past have elected to use a POTW. The Coopers and Lybrand study confirms the financial attractiveness of use of a POTW in most instances, especially in the absence of ICR payments, but it appears that the advent of the pretreatment and ICE requirements will alter this situation. In many instances it will become cheaper for an industrial discharger to self-treat, rather than to use a POTW under the new pretreatment and ICE requirements.

Like self-treatment, pretreatment requires industrial dischargers to construct and operate treatment facilities and to be responsible for facility malfunctions, personnel recruiting and training, and disposal of sludge in accordance with RCRA, the Safe Drinking Water Act, and the Clean Air Act. Once these industrial dischargers are required to undertake these responsibilities, only limited additional construction and operating expenses are required for self-treatment, and many of these industrial dischargers can therefore be expected to choose self-treatment instead.

Since ICE will also increase the cost of industrial use of the POTWs to which it will apply, it will also decrease future industrial participation in those POTWs, compared to the level of industrial participation that would occur in the absence of ICE. It is difficult to quantify this decrease. There are advantages and disadvantages to each option for industrial wastewater treatment, and the choice made by each industrial discharger will be based on an amalgamation of all of the advantages of each option, as applied to each industrial discharger's unique circumstances.

An analysis of the textile industry (Table II-8) suggests that it may be more economical for some large industrial dischargers to self-treat in accordance with Best Available Technology guidelines, rather than to discharge to a POTW under proposed Pretreatment Standards. However, for most small industrial dischargers it may be more economical to use a POTW. The breakeven size ranges from 25-150 thousand gallons per day depending upon the size of the POTW and the industrial cost sharing agreement between the POTW and the industrial discharger. The major reason for the shift in advantage is that user charges (charges to pay for operation and maintenance of the POTW) are directly proportional to flow while there are economies of scale at larger flows for Best Available Treatment, pretreatment and the industrial cost exclusion.

Thus at large flows, user charges may dwarf pretreatment and ICE costs for industries that may use a POTW. However, according to industrial souces, the incremental cost of ICE might be a critical factor in determining industrial participation in a publicly owned treatment works and industrial plant closures and relocation.

Any other major unavoidable expense could have the same result by forcing the plant to reduce production or cease operations. Examples include raw product costs which are higher than other competing production areas, and labor or transportation costs which become unreasonable.

Management's reactions to such circumstances vary depending on the size of the company, its profitability, and the number of plants operated. Single plant companies with low profit margins and limited financial resources probably would not remain in business when confronted with a significant increase in cost for wastewater treatment (including user charges or pretreatment), raw products, labor, or transportation.

Multi-plant companies have the option of reducing production or closing plants when costs of operation become too high for any reason. Production will be moved to other more profitable plants. Several major companies will close plants this year because of operating costs being too high and profits too low. It is important to realize that multi-plant companies consider each plant to be a profit-center in itself. Thus, each plant is operated as if it were a separate entity which must achieve a profit margin set by corporate management. If a plant cannot meet the company's profit objective, the multi-plant company will move production from an unprofitable plant to one that is more efficient. Single plant companies, of course, cannot exercise this option.

TABLE II-8 COMPARISON OF COSTS FOR DIRECT TREATMENT OF INDUSTRIAL DISCHARGES VERSUS INDUSTRIAL PARTICIPATION IN PUBLICLY OWNED TREATMENT WORKS

ANNUAL COST - TEXTILE INDUSTRY

Industry Flow MGD	Self-treat			10 MGD POTW Secondary Treatment						
	Cap. Cost 20 yr 22% (1)	O&M (2)	Total (1)+(2)	Service Charge (3)	Pretreat (4)	Total (3)+(4)	I C E 20 yr 11% (A)	I C E 20 yr 22% (B)	Total (3)+(4) +(A)	Total (3)+(4) +(B)
0.05	$ 75,000	120,000	200,000	26,000	150,000	176,000	7,000	12,000	183,000	188,000
0.10	96,000	140,000	240,000	52,000	180,000	232,000	14,000	23,000	246,000	255,000
1.00	210,000	310,000	520,000	520,000	320,000	840,000	140,000	230,000	980,000	1,070,000
2.50	330,000	450,000	780,000	1,300,000	560,000	1,860,000	350,000	580,000	2,210,000	2,440,000
5.00	560,000	570,000	1,100,000	2,600,000	980,000	3,580,000	700,000	1,200,000	4,280,000	4,780,000
7.50	610,000	840,000	1,400,000	3,900,000	1,300,000	5,200,000	1,000,000	1,800,000	6,200,000	7,000,000

NOTES:

Total (1)+(2)	Industrial cost to self-treat
Service Charge (3)	ICR repealed or municipality pays for ICE (estimate of the "user charge" for operation and maintenance plus amortization of 25 percent local share at 22 percent interest over 20 years)
Pretreat (4)	Pretreatment costs (amortization of capital costs at 22 percent interest over 20 years plus operation and maintenance costs)
Total (3)+(4)	Service charge plus pretreatment cost
Total (3)+(4)+(A)	ICE prefinanced by municipality, to be repaid by industrial user (11 percent, 20 years)
Total (3)+(4)+(B)	ICE financed "up-front" by industrial user (22 percent, 20 years)

III. CASE STUDIES

Perceived impact of the Industrial Cost
Exclusion; a qualitative research study.

The perceived impact of the Industrial Cost Exclusion was determined in three areas: Watsonville, California; Gloversville-Johnstown, New York; and Milwaukee, Wisconsin. The first part of this chapter contains a qualitative research study. In the second section of this chapter are letters from community officials in the study areas, which describe, in quantitative terms, the potential impact of the Industrial Cost Exclusion.

III. CASE STUDIES

INTRODUCTION

The objective of this study was to explore the effects of Industrial Cost Exclusion (ICE) on the thinking and decisionmaking of community and industry leaders. These leaders were drawn from cities known to be affected by ICE. The study thus seeks to increase understanding of the reactions to ICE by those most concerned with it.

It should be understood that no attempt is made here to evaluate the objective, long-run economic impact of ICE; rather the goal is to determine the perceptions and opinions created by ICE. The present analysis deals by design with the subjective and short term. The perceptions and opinions of those involved in the local decision process will, however, be a crucial determinant of eventual economic impact.

METHODOLOGY

The approach taken to explore the effects of ICE on those involved in the decisionmaking process was qualitative rather than quantitative. Specifically, focus group interviews were used. These interviews followed an open group discussion format. Group interaction results in a high level of spontaneity and candor. The interviews lasted about two hours and were tape recorded for analysis.

Seven interviews were held. The composition of the groups varied as follows:

- One group of community leaders, one group of leaders from large businesses, and one group of small business leaders from Watsonville, California.
- One group of engineering and financial personnel from a large corporation with a plant in Watsonville.
- One group of community leaders and one group of business leaders from Gloversville and Johnstown, New York.
- One combined group of community and industry leaders (4-hour session) from Milwaukee.

The cities of Watsonville, Gloversville/Johnstown, and Milwaukee were chosen for their geographic and industrial representativeness.

For this report to be read in proper perspective, the reader should be acquainted with the following. The focus group interview is a research technique designed to provide an in-depth rather than statistical analysis. No attempt is made to quantify or statistically generalize the findings of this research. The goal is to discover broad patterns of perception and opinion rather than to pose specific, preconceived questions.

Also, it should be noted that the findings examine ICE from the point of view of community and business leaders--how they see ICE in their own terms and from their own frame of reference. This report should not be interpreted as endorsing the objective correctness of any statement. What people believe to be true, however, affects their decisions.

No single finding applies to every individual. Findings should be viewed as holding generally across people, with individual variation in the group pattern. Differences among communities are noted where appropriate.

Quotes from the interviews convey the way people expressed themselves. The reader can, accordingly, better judge the exact tenor of people's thoughts. The quotes are also intended to provide a better appreciation of the basis of the findings. All quotes are typical in that they are similar to those made by a number of persons.

FINDINGS

1. ICE has created an impasse in the minds of community and industry leaders.

In each of the three communities in this study there is a general perception that there has been steady progress toward development of a workable sewage treatment plan. That a facility has not been completed is attributed to problems and unique considerations that have arisen. There is a strong feeling that any delays have been unavoidable, and that the EPA review process has been the primary delaying factor.

- "We keep getting this postponement because of new regulations and that not only costs us money but also delay. Everybody says, well, in six years we should have had it accomplished and finished. Well, we probably should have, but we didn't because we were looking at alternatives hoping that the water situation would change...."

- "I think the record probably would show that the district moved forward with all deliberate speed consistent with the encumbrances placed in its way in the manner of various lawsuits. I don't think that the argument will hold water that there was any foot dragging."

- "We seem like we're on the threshold of getting our treatment plant, complying with regulations and everything else, and now all of a sudden we come up with this amendment. You know, everything's dead in the water now. It's just--it's impractical that industry can come along and just make an about face--after five years of putting all the work and effort. This industry has been working very hard together to solve these problems."

...

- "So we put in an application early on feeling that monitoring stations, if they were built right away, would help us with the basic design data, not only in the pretreatment program enforcement but the actual design of the plant. And, as the mayor said, we were led to believe, I guess you could call it, in project meetings that this was an eligible cost. Let's see, our first application goes in very--let's see, late in '78, it isn't reviewed by the State until August of '79. At that point they send it down to New York to the Region 2 office. The Region 2 office responds in February that it was not an eligible cost. We then appealed to Washington and it was in April or something like that--we were turned down at that level. We rewrite it, resubmit it, we are told, without these monitoring stations, we're told in August of '80 that it's approvable now by the State and it went down to New York again, and at this point it is approved September 30. Then the interesting part there becomes that, after hearing our justification again, the State appeals to Washington, and we now have a letter that says it is possible that they are eligible, that we can produce again a justification, that we can reapply again. So we went and we came and we went--I don't know how many times exactly it was. But this uncertainty has been a problem there. It's held up our facilities planning."

Communities believe therefore that they are subject to ICE through no fault of their own. Moreover, ICE is viewed as a barrier to further progress.

- "And the city, of course, has been involved in a number of issues with the Federal government in addition to studying improvements to meet the secondary treatment standard. We've applied for a waiver for secondary treatment and going through that process has taken a lot of time and required a lot of additional investment and effort and money on the city's part and has resulted in some cases in a large delay in the implementation of the project. And I think one of the important issues that needs to be recognized about the project as we have it planned now is that it's taken six years of coordination between the various entities in this community to get support from all sectors for a project that will meet the standards as required; and finally we've reached agreement on a way to do that and if the Stafford Amendment [Industrial Cost Exclusion] becomes effective and we cannot meet the deadline for implementation of the Stafford Amendment [Industrial Cost Exclusion], then that project will be infeasible."

- "But it isn't like we haven't done anything. We've done many things for five years. We're waiting for a waiver--in the meantime we're doing things. We are eligible for a waiver. That perhaps is two years down the road.... But if we don't meet it, then the Stafford Amendment [Industrial Cost Exclusion] will put us out."

Industry has taken the position that ICE is financially impossible.

- "That's what the city is telling us...that's what they intend to do. That's what the city is telling us the Stafford Amendment [Industrial Cost Exclusion] is mandating them to do, is come to the processors for that additional money....Well, there's no way our company is going to pay."

- "Government funding which is enjoyed by a whole bunch of other communities prior to the Stafford Amendment [Industrial Cost Exclusion], which will pay our fair share and we will pay the lion's share of the city's 12-1/2 percent, and we figure we can live with that--it might be tough, but we can live with that. That's the only thing we can live with."

- "We've been worrying about this process now for six years, trying to make sure that we were able to keep our head above water as we've gone, and along comes the Stafford Amendment [Industrial Cost Exclusion] with this theory here, and we'll be just down the river. There is no ifs, ands and buts about it. There is no way that we can do it."

- "Especially under the ICR, if we get in under the amendment and don't have to pay it back, if Jill Blow or Jim Blow go broke in the process, we aren't stuck, because we don't have to worry about that particular deal. But under the way you're thinking about [ICE] we're--we would have to pay--pick up their obligation. We can't do it, regardless.

This position has been accepted by community leaders.

- "They would go out to their industries--their major industries--and ask them to provide funds upfront and I think most of the industries have got the position that, no, we're not going to do that."

- "One company said, I don't have any conversation here. I don't have anything to participate in any discussion, the answer from my company is, you tell them if we have to put up the money, we're out, and there's no room for talk."

- "Well, they just told us they'd close down. They'll move their operation to another area, not this plant, but ship the stuff to a different one where they already are."

- All of our national firms indicate the fact that they are--each one--responsible as a unit for a profit, and on their percentage of this, they can't justify it over even a long period of time, they can't recover."

The net result has been that ICE is perceived as an impasse. Local government is expected to collect from industry but industry is not able to pay.

2. ICE tends to be regarded as a capital commitment, making the impasse between industry and the community much worse.

Industry regards ICE as calling for a capital commitment on its part. Because the expenditure would be for an essentially unproductive asset, this raises strong concerns about return on investment and indebtedness.

- "But we have never participated in the capitalization of a plant for the city--not directly, and what this amounts to is that kind of involvement."

- "Putting money into a municipal sewer system is the way I understand it. The way we're looking at it now."

- "You know, quite frankly, our corporation has not ever invested upfront money into any municipal thing. If you do it with a waste treatment plant, the next thing you know we're going to have buses running on the streets... spend stockholders' money on things we don't manage or control and get a fair return for. That's not to say we won't, because I certainly don't speak for the corporation. But let's be realistic--it's damned doubtful that we would."

- "Ours is at $81,000. I know how our company feels--that we need operating capital and they're not looking very favorable toward putting out $81,000 into a project that does not really improve our set up."

- "I borrow money to run my business, and I'm limited in my credit. I can't borrow the money anywhere--I'm not the government, and I can't tax anybody. So, if you can't borrow money to run your business, what're you going to do? Are you going to operate very long?

ICE also differs from normal investment decisions in that there is no control over or equity in the facilities.

- "Without really very much control, and it's not the kind of investment that I think most people would want to make."

- "If you're going to crash and burn, you have to crash and burn before you put the money up into the publicly operated treatment works, because once you got the money in there, if you crash and burn, they don't give it back to you, you just own a piece of the sewer plant and you're not in business anymore."

- "Are you trying to tell me that, if I run an industry and I commit to you, that I give so much towards that plant? How do I know how long I'm gonna be in business? Maybe one year, two years, three years, then what the hell happens?"

- "The Stafford Amendment [Industrial Cost Exclusion] would make, as I understand it, would make each of us speak for a bonding portion of an expanded sewer and be liable for that without--really without knowing where we're going to be in seven years or however long it's going to take to expand the facility and whether or not we could go to some new concept that might come on the horizon and do something."

- "What if he's only in business two years--how do you amortize that damned loss when he goes bankrupt? See, I mean, it's not feasible."

- "And also you're putting money into a municipal sewer system. How would you--what do you have--an undivided interest in the sewer system? It's not your asset, it's the city's--how would you work that one out?"

Beyond the contrast between ICE and any normal capital investment, there is a philosophical objection to investing in a public service. It is simply not the role of business to provide such capital.

- "Now we're confronted with a situation where we're paying actually for a public utility which is not in the scope of normal business."

- "I think it's drastically uncommon that you move into a situation where you're employin' a sizable amount of people and then you're asked to put in a public utility. This is so assinine it turns my stomach."

- "We're supplying labor and a payroll for the city. Now where in the hell is it our position to now put in a sewer plant. And that's everybody's feeling in this damned town."

- "So that if our plant should close because of other circumstances, let's say that some big disease of some kind swept through the growing areas where our products are produced, and all of a sudden we don't have a business there any more, we would still be there--now we wouldn't have that kind of an arrangement with a power utility--the water department or anybody else to, you know, pay after our business was gone; it's only with this sewer authority."

- "When Pacific Gas & Electric runs out of generating power, they don't come down to their customers and say, you know, we've got to have some money to build a new power plant down here; it just doesn't work that way and we kind of, I think, see the sewage utility the same."

3. If ICE could be considered an expense item, it would be evaluated on an ongoing basis.

Except in Milwaukee, industry does not see much chance of being able to treat ICE as an operating expense as opposed to a capital commitment. This possibility, however, is far more attractive to industry. It would allow ICE payments to be evaluated just like any other expense, on an ongoing basis as they are incurred. The possibility of treating ICE as an operating expense also suggests that a company would have time to find ways to reduce their costs.

- "Our options--maybe we go along and continue to pay that higher sewer bill or we can walk away from it any time we elect. It's the form of obligation that is so crucial. Will the form of that obligation affect our balance sheet, our ability to borrow?"

- "I think from the independent standpoint--speaking for myself and maybe independents too--we're saying, okay, we can see the light at the end of the tunnel. By increases we can try to improve our situation, too, maybe not in the same manner as a national company, but we can at least have a shot at it and try to stay in business. If it comes the other way, it's impossible to go borrow the money to do. It's as simple as that. It ends it before we even--nobody's putting the effort into it. So there's a complete difference between the upfront part and the increase in rates. That's the problem."

Even regarded as an operating expense, however, there is still a strong skepticism about the ability to pay for ICE. It would be difficult to make up the additional cost other than by cost reduction efforts.

- "The way all costs are going, you say, oh, you can stand a little more. Okay, sewage on our cost statement, as it was, say, a year ago, two years ago, is a very small part of our costs. But if they put a new sewer plant in, it's gonna be around 20 cents a case from around one cent to 20 cents a case. That's one hell of a jump. Okay, our fuel, power and water--three years ago was 2-1/2 cents a case. It's 35 cents a case today. That's what's happened to that. Well, that has nothing to do with the product that's in the can or the can or anything else. So...now we're gonna add another 20 cents for sewage, which is a major cost at this point."

- "In other words, we'd have to go out and recover this over the period of this project, we'd have to sell better than 20 million barrels of beer just to pick up the tab for this."

4. Self-treatment is not considered a viable option, though pretreatment to offset increased rates would be viable.

Industry generally does not see self-treatment as an alternative to municipal systems. Self-treatment may be technically feasible but is economically doubtful. Most critically, land is typically not available for this purpose.

- "Knowing the kinds of treatment systems that we're going to have to have at the joint facility because of the strength and the nature of the leather tanning wastes, for the individuals to look at meeting a stream standard as a direct discharger, the investment that they would have to make in their own facilities would be substantial. I don't have a good feel for the number, but I would feel that the economies of scale and so forth, it would fall out immediately."

- "We are severely limited by space. Now if we're required to add on an initial pretreatment segment and then forced to build secondary treatment, you know, you just can't put that in a quarter-acre lot or in your garage."

- "It would be a tremendous expenditure for these companies to go and say, okay, we're going to build our own treatment plant. First of all, a company like ourselves wouldn't put that kind of money in capital dollars into wastewater treatment and, second, there's no place for us to do it. We're blocked in. We've got 10-12 acres over there, we're surrounded--there's no way where we could put it in."

- "It's certainly technically feasible for these people to do it; however, economically it's not feasible and in some cases the technical feasibility is even constricted by land constraints. This is not an area that necessarily, around a given plant, they would have the area required for the treatment."

- "To me, in the real world, 90 percent of the time, that isn't an option. Your plant has either been served by the city system and is now land locked and does not have access to property, does not have easements to get their wastewater out of their facility, they don't have a river or stream going by, you know--there they are, they're stuck!"

There is also concern that self-treatment is associated with too many uncertainties. There is no guarantee of success.

- "Well, again, self-treatment is a possibility if we knew what we were aiming towards. Nobody seems to know other than taking out solids that you can develop a self-treatment. There's a limitation as the gentleman pointed in the land."

- "Nobody has agreed exactly what self-treatment...what this is. So how do you plan or how do you build something that could be obsolete in six months or it could be obsolete in six years?"

- "How can you say self-treatment when the State and the Federal don't know the answers--how do you expect us to have the answers? They tell us to do this, but nobody has the answers. They say, well, you do it, but they can't prove that you can do it even...."

Pretreatment to reduce rate increases is seen as a very viable option. Many believe that pretreatment would become essential.

- "And as Jim said earlier, there are no babes in the woods around this table. And all of us will take out--will pretreat to 60 or 70 percent that we can take out economically and we'll give [the city] the remaining 30 or 40 percent that costs like hell to get rid of."

- "Really, there's two questions here on pretreatment: (1) Can you afford your overall economics of investing in nonreturnable assets--assets that you benefit nothing from? If that's negative, I guess you're out of the question entirely, but if that's a positive decision, if you can invest in that, then the question is, do you invest with the MSD or do you go on your own? That's a second economic question. I think we'd take a second evaluation. In our case, we would try awfully hard to survive the first one; secondly, we would try awfully hard to justify going to pretreatment on our own, to reduce not only the capital investment but the ongoing user charge."

Although pretreatment is considered attractive, there is concern that pretreatment will not eliminate exposure to the built-in fixed costs of a municipal facility.

- "That rate increase on operating expenses is going to be damned difficult to offset. One of the things that will happen is we'll invest money to offset that. The cost of operating a wastewater treatment plant is not going to go down. So everybody else is going to share at what we're going to offset through investment. So what your share may be today, at a 500 percent more could very easily be 1000 percent by the time companies like ours start investing to offset."

- "Whatever happens from that point on, the capital costs are still there--whether it be $25 million or $30 million, some of the industries will absorb that. If they pretreat, remove solids, whatever, has no effect whatsoever on the initial capital cost. Someone has to absorb that capital cost."

- "I would imagine that if most of it was pretreated--whatever the operating needs of the district were--it would quickly shift to what was left--the dollars would have to come from somewhere."

5. Local government is perceived to be in a bind with almost no options.

The burden of finding a solution to the impasse over ICE is thought to fall on local government. Both the Federal government and the city have left it up to local government to find a solution.

- "The thing that I see is the Federal government attempted, on their own, by direction of Congress, to come up with a system so that they could be repaid by industry. They failed. They had a system that they couldn't get off the ground. The administration of that system was unbelievably cumbersome. They found out that the so-called letters of intent and all these other things didn't hold water, that if industry wanted to fold, they had to go and chase industry and find them, they had tremendous problems with sizing the plants and the facilities properly, based on these letters of commitment. They've failed in their own attempt to try to come up with some of the questions that you're asking us now, what are we going to do if we don't have that money available. There has to be a system and commitments, but the Federal government could not agree--or did not come up with a system that worked."

- "One of the easiest strategies that we could take is to absolutely do nothing. Throw it back to the city."

Local government, however, is perceived to be in a bind with almost no options available. Only in Milwaukee was there any hope of financing.

- "We're not sure if the municipal bond market is ready to absorb Milwaukee County debt at the rate that we're going to have to issue it under this project; and again, it's related to the lack of grant funds which has to be made up in the municipal debt markets on the other side, so that's a very real problem--and something we're extremely concerned about in the marketability of the bonds."

- "We have another situation--you may be acquainted with Proposition 13 in California. It prohibits us from any bond issues--impossibility to get a bond issue passed now because it requires 2/3 of the registered voters, not of those people who vote. You don't get 2/3 out to vote, much less getting them all on one side, and we don't get a 66 percent turnout on an election, which--and everyone of them would have to vote for it if you got 'em, so we know that's an impossibility. Revenue bonds we're extended to our limit just to do what we're doing now, that's where this million and a half is coming. As far as our financing potential, no, we do not have a financing potential for it."

- "We're in an untenable position. We can't afford it. The industry in this town will die. We have nowhere to go."

- "I doubt very much whether the city is even going to even consider the study of a plant when they know there's no money forthcoming from anyone else but the city government. I doubt it very much. They don't have the money."

- "If they elect to enforce the law as presently written from the Federal government on down, we don't have any options...."

Local government's reaction to this perceived bind has been to continue as if ICE was not a factor.

- "We feel that we have to do everything we can at least and spend the money we have to go ahead and prepare ourselves for the plan. If it happens at the end of the line, and we don't get a waiver, we don't get grandfathered in, then we're just money down the rathole, because there's no way we can proceed if we don't get that at the end of November 1981."

- "Well, there are two ways of looking at it. Yes, we're in limbo as far as knowing exactly what to do on the project, but no, we're proceeding as if the Stafford Amendment [Industrial Cost Exclusion] wasn't there."

- "We don't have a choice, I mean, you can whistle by the graveyard. We have to go on like this. What is our alternative? You say what are your alternatives? The only thing we have right now is one, to go ahead and hope for the best."

- "We're going on as if we didn't know any better."

There is little active planning for the effects of ICE. Both community and business leaders have adopted a wait-and-see attitude.

- "We're proceeding with the facilities planning, but the point that we come to the investment of the capital, that's definitely wait-and-see."

- "With the changing, the moratoriums and the changing in the regulations over the years, we felt very strongly that there's no sense in getting excited about anything until EPA finally makes its commitments, because we've had too many of these things change and we've gone down this path only to have to come back and go this way again, so we've taken the position, now, let's wait till we have a more definitive direction to follow and we are able then to move rather quickly in that direction."

- "But we're taking presently a wait-and-see attitude and I'm sure that we can convert to a more detailed evaluation if we see things going toward implementation."

6. Political action to repeal ICE is considered the best course presently.

The best thing that could happen in people's minds is for the situation to revert back to the one before ICE, that is, Industrial Cost Recovery.

- "But I would say that if we could get back to the position that we had prior to the amendment where we could get Federal and State funds to that the city only has to absorb 12-1/2 percent of the total cost, then I think we would be in a position to absorb that cost, not that we'd like it, but I think it's the least of the total problem."

- "The best thing would be if the Stafford Amendment [Industrial Cost Exclusion] was revoked or repealed."

- "I think the best thing that could happen right now would be as much pressure on Congress and whomever to reinstate the 75 percent capital grant--at least there was a bit of light at the end of the tunnel that there was some capital reimbursement against improvement at the plant."

This suggests political action to repeal ICE. Such action is entirely consistent with the wait-and-see attitude toward the effects of ICE.

- "The only recourse we have is through what little we can do politically. Start with letters which we started with, talking with our representative, somehow we've got to get the State of New York involved, because it could mean a significant loss to the State if the county disappears. That's the only recourse we have left is to have this bad amendment to a relatively seemingly good act amended."

- "It was our first course of action. We've sent petitions back signed 90 percent of all the employees, even Stafford's office admitted they'd received all those petitions."

- "So, we've gotten their ear and they've shown an interest and I think that we do have plus--I know it may be not a nice thing to say--I know there's gonna be less emphasis--everyone knows and The Wall Street Journal indicates that there's gonna be a great deal less emphasis on the EPA requirements."

7. Industry closings are a distinct possibility if ICE is implemented.

Although the repeal of ICE is being pursued, as a course of action, this result is by no means taken for granted. The implementation of ICE is considered a real possibility. It is believed that implementation would lead to industry closings. Smaller firms would simply be forced to go out of business while larger firms could shift production to other plants.

- "Some of them are already paying $2,500 to $3,000 a month for sewer charges alone, and see if that's gonna double--$6,000 to possibly $9,000 a month, that'll break 'em."

- "But I quite frankly can see the city really kind of drawing up to a little shell if it really happened. I can say that quite frankly, I don't see how we can survive."

- "Or, you might just go out of business at that one location and add a little bit to the other producing locations, if you had enough other ones. In fact, the supply situation in the vegetable business right now is such that you could close 10 percent of the plants and never replace the capacity and people would still have all the vegetables they want."

- "And for the record, the brewing industry in this city operates approximately 18 to 20 other breweries in other parts of the country where it would not be unrealistic to expect shifts in production. To examine just one set of numbers, the kinds of burden that we're looking at in the brewing industry here is about 2-1/2 times the cost per barrel of beer produced in some other locations."

Even if some firms should prove able to pay, there would still be a domino effect. Those businesses that did not close would have to bear an even greater burden of ICE cost. This domino effect ensures that implementation of ICE would result in economic disaster.

- "Well, if you go by the process of elimination--say 90 percent of the group say the hell with it and move out of town. Where does that leave the 10 percent that're left in this locality?"

- "They'll lose the major industry, the major industry can't absorb the total cost. Now this is exactly what will happen here. Assuming that we all say, well, maybe we'll commit ourselves over a 30-year period--certainly, it'd be below 30 years. I don't think there's a single company that can absorb the allocation of the cost. So you'll have 21-25 industries committing themselves to that amortization and within several years, there's no question but that the smaller companies would be unable to meet their commitment. And they go out, and therefore the balance of the companies have to absorb that cost and so, over a period of years, there will be a certain few of the companies, and eventually maybe you'll end up with maybe two or three industries and maybe they can stay alive and maybe they can't. So, over a period of years, you're going to lose the entire industry of the county."

8. It is felt that implementation would involve a long, drawn-out process.

It is not expected that ICE would result in immediate enforcement and industry closings. Implementation would more likely be followed by a protracted period of discussion, negotiation, and litigation. At this point, however, ICE would bring progress on existing plans to a halt.

- "There'll be about a six or seven year dialogue when everybody's in varying degrees out of compliance with various things and people figure out how to do it.... 'Cause I have to think back of what the other situations we've had here--cities, State and Federal and industry were in different positions, at each of our locations. It's been, you know, five to six years, and nothing has been--confrontation, there's been no real litigation, all there's been is constant discussion. We'll get a temporary delay until this, a temporary easement for this, and we'll meet and disucss this, and it hasn't been that nobody intended to do anything, it just was damned hard to get a solution. I suspect this is going to be the same way.

- "If there's no 75 percent, I'd say, status quo is probably a close-to-forever."

- "I think it would drag on for several years probably with no one doing anything."

- "And that's one of the key upshots--five years from now you will have spent a lot of money--contractors and consultants--the cost of ever doing something will be that much further away, and probably be no further down the pike and the quality of the water in Lake Michigan will probably be no better."

One of the most negative consequences of such a delay would be to decrease cooperation between the community and industry. Discussions about implementation are likely to pit the two against each other.

- "The other impact you're going to have if this were to come to pass is that you're going to have a big argument between the industries located within this municipality and the municipal governments."

- "Depending on what decisions would be made by the commissioners--we may well wind up in court again, with the industries on one side and us on the other. I'm painting an entire picture--a broad picture. I hope that doesn't happen and I suspect it will not, because we've had a pretty good rapport."

There is some sentiment that implementation might have a positive effect of forcing a reexamination of existing programs. In particular, less expensive facilities might emerge as an alternative in the absence of government funding. Underlying this is the belief that existing plans are over-designed anyway.

- "The best possible case in my judgment would be one wherein if the Stafford Amendment [Industrial Cost Exclusion] remained a fact, it also mandated a reexamination of both the extent to which the goals and objectives of the '72 water act were to be applied and perhaps even more importantly, the time frame within which they'd be achieved--that allows industry and municipalities to still espouse the noble goal of clean water but accomplish it in a framework whereby we're not bankrupt."

- "But, maybe that's a cheaper way to do it, if you say to heck with Federal money and you build it yourself, because then you don't have all the Federal rules and regulations that you've got to...."

- "I'll tell you one thing we're very close to and just started discussing it maybe a week ago, if the funding is reduced to the level that the Stafford Amendment [Industrial Cost Exclusion] would have it, if we were building the plant without the grants program, we wouldn't be responsible for a lot of the regulations that come with the grants program....And we'll do a building with only local funds, we could easily save the Federal share I think and just not have to pay the prevailing wage rates."

- "If the Federal government's only going to contribute $3 or $4 million anyway, the question becomes, why bother? We certainly could do it faster if we did it on our own, I think."

9. Resistance to ICE is increased by the general perception that it is inherently unfair.

The details of the ICE are perceived to be arbitrary and poorly conceived. It is felt that little consideration of implementation problems went into drafting the legislation.

- "I think the problem with the Stafford Amendment [Industrial Cost Exclusion], if I could speak to that for just a second, not knowing the background, how it came about or anything else or what the thinking was when it was enacted--the idea of the 50,000 gallon limit sounds like, well, that's not a lot of volume. A small plant here will use 600,000 gallons a day. We use at times over a million gallons a day, which doesn't mean we're a big operation. It just means we use a lot of--we're a very water-intense industry, because of just basically washing food products."

- "...where some communities that don't have our problems are given grant funding and because of two arbitrary figures--50,000 gallons which was arbitrary, and November 1, 1981, which was arbitrary--all of a sudden we don't get any grant funding. And there's people all over the United States that got that 30-year, no-interest money. That seems to be very arbitrary--that seems to be the most unfair portion of the whole thing."

- "Why is November the first? That was picked out of the air."

- "How did the 50,000 gallons a day--do you know how that standard was derived--I mean, tomorrow, if we amended this to read 350,000 gallons--it used to be 25,000 gallons a day and then the amendment was broadened to 50,000 gallons."

- "The 50,000 gallons was arbitrary, they picked it out of the air. The November 1st was a figure they picked up--it could have been November 1, 1982, as well; they just put a deadline on there."

- "The principles sound clear but the details sure sound fuzzy. In principle, I think we certainly agree in industry that we should pay our share of whatever effluent we cause, that we're accountable for whatever wastes we have. And we want to do that, and we're thoroughly in accord with the Federal government decreasing its scale and size and just put those two together, how do you resolve it, when you start working with the city, I think that's--I still see the same problem with the transition...."

The law is also thought to promote rather than reduce unfair competitive advantages among firms.

- "My competitors got theirs funded by the EPA. They got theirs paid for, on their own property--competin' in the same market. Makes me feel good. Now the EPA's telling me--you put up the money."

- "In the tanning industry, I believe it's something in the range of 10 percent of the tanneries are in direct dischargers. Well, what we're gonna do is we're going to help the 10 percent by penalizing the 90 percent. It doesn't seem fair."

- "We have one example, a major competitor has already had grant money extended to their facilities wherever they operate and they had, at one time, a $3 or $4 million obligation to repay. That has been eliminated as a result of this recent law."

Perceptions of the law are further colored by doubts about any real benefit to the environment. Industry particularly does not see any cost-benefit logic behind ICE.

- "We're being forced to pay out secondary treatment... we're being forced to comply with a law that appears simply for the sake of compliance, not because somebody's gonna get some benefit from it."
- "And they go along one step farther--there's no one single document out there that says we're doing anything detrimental to the ecology of the Monterey Bay right now."
- "Hundreds of thousands of dollars--studies all over--and there's not one single documentation that we're doing anything detrimental. That has to be kind of concerning to the business community."
- "We asked, six months ago at public hearing the head of the commission, what benefit will accrue to the community for this bankrupting, we got the answer and I think it's almost a direct quote, that the water quality will be improved by about 10 percent. Now I'd like you to ask any sanitary engineer--anywhere--what that means."
- "My information on the Stafford Amendment [Industrial Cost Exclusion] was that it was to stick big buisness--they've been getting a free ride long enough, quote unquote, let's stick it to them."

CONCLUSION

These findings have dealt with the perceptions and opinions of community leaders. It should be kept in mind that the issue is not whether these perceptions and opinions are right or wrong. At issue are the consequences for the wastewater treatment decision process.

The interview indicate that the following perceptions are evident in the three communities which participated in the case studies. These statements shall be viewed as the perceptions of significant members of the community as opposed to a factual description of actual conditions. These perceptions cannot be generalized to all communities potentially impacted by ICE.

- ICE has created an impasse rather than an impetus for progress.

- Efforts have been redirected from existing plans toward political action.

- Cooperation between industry and community has been strained.

- There has been a perceived narrowing of options and an overall tendency to "wait and see" what happens.

It should be emphasized that this conclusion, in itself, does not imply that the overall long-run economic impact of ICE will necessarily be negative. It does imply that the decision process has been adversely affected. This in turn means that attention should be given to how positive long-run economic consequences might be attained.

CITY OF WATSONVILLE
CITY HALL 250 MAIN ST. P. O. BOX 430
WATSONVILLE, CALIFORNIA 95076
TELEPHONE AREA CODE 408 722-3551

July 23, 1980

Honorable Leon E. Panetta
House of Representatives
431 Cannon House Office Building
Washington, D.C. 20515

Subject: H.R. 6667

Dear Leon:

It is our understanding that the House of Representatives will soon be considering H.R. 6667 to amend the Federal Water Pollution Control Act. One of the major components of this bill is the repeal of the Industrial Cost Recovery (ICR) provisions of the Act, which provide for larger industrial users of a municipal wastewater treatment system to repay the Federal portion of a Clean Water construction grant. The City of Watsonville fully supports H.R. 6667 and the repeal of ICR. The basis for our position is that the ICR program has not effectively achieved its original purpose. Technical support for this conclusion is provided in House Report No. 96-983 and is summarized in the following sections of this letter.

Background. The passage of the Clean Water Act amendments of 1977 (P.L. 95-217) officially recognized the procedural problems experienced in the administration of the ICR program. The EPA and the Congress recognized that the ICR program was not efficient in achieving its original goals, which included:

- Eliminating a competitive advantage to industries utilizing municipal treatment systems,
- Providing adequate, but not excess, capacity for planned future growth,
- Encouraging water conservation,
- Facilitating local self-sufficiency for financing future treatment plant expansions, and
- Encouraging industrial participation in municipal systems and regional approaches to wastewater treatment and disposal.

The 1977 amendments revised the ICR program by setting a minimum capacity limitation of 25,000 gallons per day on impacted industries. In addition Congress placed a moratorium on the collection of ICR until July, 1979, while EPA completed an analysis of methods to improve the ICR program. The moratorium was subsequently extended by Congressional action until July, 1980. EPA contracted with the consulting firm of Coopers and Lybrand to perform the analysis of ICR. In its report submitted to EPA in January, 1979, Coopers and Lybrand concluded that ICR had failed to accomplish the goals established by Congress and actually recommended repeal of ICR. In transmitting the report to the Congress, EPA softened the report's conclusion to "the ICR provisions of P.L. 92-500 have not accomplished their legislative purposes."

EPA subsequently prepared another analysis of the ICR program utilizing Agency staff. This latter report recommended the retention of ICR in some modified form and suggested a number of revisions for consideration by Congress. The House Committee on Public works and Transportation held extensive hearings on the ICR issue and considered EPA's proposed modifications in detail. The Committee concluded, however, that the best course of action is elimination of ICR to "allow grantees and industries to develop and implement the most equitable and effective repayment provisions on a case-by-case basis." The City of Watsonville is in complete agreement with recommendations of the House Committee and supports the concept of each local agency developing an appropriate financial repayment program.

Issue: Senate Bill 2725. Senate Bill 2725 was the comparable bill on the Senate side proposing the repeal of ICR. It is our understanding that this bill was passed by a 93 to 0 vote in the Senate during the week of June 23, 1980. However, the bill was passed with an amendment introduced by Senator Stafford, which makes capacity for industries with flows in excess of 50,000 gallons per day ineligible for Clean Water Grants for all projects receiving Step 3 (construction) grants after September 30, 1980. Thus, the ICR program would be eliminated. However, in the future, larger industries would be required to provide the captial cost for their share of the municipal treatment works "up front" when the construction contract is awarded and would be required to develop a completely independent source of financing.

It is our understanding that S.2725 as amended and H.R. 6667, when ratified by the House, will subsequently be forwarded to a joint conference committee for resolution of the differences between the two pieces of legislation. While the City of Watsonville fully supports H.R. 6667, we are adamantly opposed to the Stafford amendment to S.2725 restricting future grant funding for industrial capacity.

Projected Impact on City of Watsonville. As you are aware, the City of Watsonville has been participating in the development of a Clean Water Grant project to improve our Wastewater Treatment Plant since 1974. A final Step 1 Project Report and EIR were published earlier this month, and the City is in the process of obtaining a Step 2 (Design) grant to prepare construction bidding documents for the project. To date a total of approximately $1,300,000 have been obligated to consultant contracts as part of this Step 1 project, including $165,000 in local funds. In addition, approximately $180,000 in local funds have been expended in the development of our application for a waiver of the Federal secondary treatment requirement. To date, no State or Federal grant funds have been made available for waiver applications.

These cost estimates do not include the significant efforts devoted to the project by the staffs of the City, the State Water Resources Control Board, the Central Coast Regional Water Quality Control Board, and the many other agencies involved in the project approval. In addition, many members of this community have devoted much time and effort to the development of the project as currently proposed, which for the first time in six years has the support of all aspects of the community (government, citizens, and industries) as well as the endorsement of regulatory agencies. If future funding for industrial capacity is limited as provided by the Stafford amendment, our project will be halted.

Of the 19 industries involved in our project, 17 (90%) have a capacity requirement greater than 50,000 gallons per day and would be ineligible for grant funding. These 17 industries, located in the City of Watsonville and in the community of Pajaro in Monterey County, would be required to provide independent financing for approximately $8.3 million of the total estimated project cost of $20 million. (This estimate assumes that private funds would be substituted for the 75 percent federal grant, but that State funding at 12½ percent would still be available.) The attached Exhibit A provides a list of our affected industries and the estimated cost to each for participating in the proposed project. These estimates are based upon an upgrading at the Wastewater Treatment Plant to meet State of California standards for ocean discharge and are 1979 dollar estimates. As you can see, certain individual companies would be required to provide as much as $1.8 million at the initiation of the project from an independent financing source. This initial cost would be in addition to a projected average increase in annual costs of approximately 340 percent above current charges. Certainly many, if not all, of our industries will refuse to participate in this project because of the unacceptable financial burden. At a minimum, the City would be required to re-study the situation to determine which industries might close down, reevaluate the required capacity for the treatment plant, and assist the local industries in evaluating alternate financing sources. If our project could be revised and continued in some form, a minimum delay of at least one year would probably be required for further study. Furthermore six years of planning and $1.5 million in consulting contracts would become obsolete.

Since the passage of P.L. 92-500 in 1972, the requirements and rules of the federal government regarding wastewater treatment have continued to change. As a result, in an effort to comply with federal law, we are continuing to expend hundreds of thousands of dollars locally (and billions nationally) on studies which become obsolete before the recommended project can be constructed. This situation must be halted.

Conclusion. The City of Watsonville strongly opposes the Stafford amendment which would limit future grant funding for industrial capacity. We request your assistance in ensuring that the Conference Committee resolving the differences between H.R. 6667 and S.2725 exclude the limitation on funding for industrial capacity in the final bill. We furthermore seek your guidance on what additional actions the City of Watsonville and local industries can take to ensure the Stafford amendment is eliminated from the ICR repeal bill. There is no doubt that all groups including the EPA, the Congress, municipalities, and industries agree that the ICR provisions of P.L. 92-500, even as amended in 1977, are not effective in accomplishing their intended purpose. Therefore, we believe there is little doubt that ICR should be repealed. We agree with the conclusion of the House Committee on Public Works and Transportation that grant repayment by industries can best be treated on a case-by-case basis. We oppose the arbitrary time limitation proposed for September 30, 1980, after which date industries over 50,000 gallons per day in capacity would be denied construction grant funding. This situation would certainly be inequitable in that many large industries throughout the country have already received construction grant funding and will now be relieved of ICR repayments, while industries in projects such as ours will be denied grant assistance.

As I have described, passage of the Stafford amendment would have a devastating impact upon our project. I am sure it would also severly impact many other projects throughout the State of California. Unfortunately, most other municipalities in our situation appear to be unaware of the potential impact of the Stafford amendment to their projects. While the repeal of ICR was subject to wide-scale public participation and many public hearings, the proposed limit on industrial capacity funding has not been the subject of widespread discussion.

On behalf of the citizens of Watsonville I wish to thank you again for your continued assistance in resolving the many problems we have faced in complying with requirements of the Environmental Protection Agency. If you should require additional background information concerning the impacts of the proposed Stafford amendment on our project, please contact Christine A. Kahr, the City's consulting engineer, at (408) 722-3551. We would also appreciate your suggestions for contacting other appropriate individuals who should be made aware of the potential adverse consequences of the Stafford amendment.

Very truly yours,

Bill

William Johnston
Mayor
/ta

City of Gloversville
CITY HALL
GLOVERSVILLE, NEW YORK 12078

MAYOR
LOUIS NICOLELLA
773-7521

CITY ATTORNEY
ALFRED E. GERAGHTY
725-7483

CITY CLERK
MARIO S. BALZANO
773-7527

COMMISSIONER OF FINANCE
LOUIS COCO
773-7527

December 29, 1980

Industrial Users Study
Municipal Construction Division (WH-547)
Room 1217A
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Dear Sirs:

Please accept this letter and the enclosed materials as comment regarding the potential effect of Section 3 of Public Law 96-483, Amendments to the Federal Water Pollution Control Act, as requested in the Federal Register of December 1, 1980. Please note that included are Resolutions of the City of Gloversville Common Council, the City of Johnstown Common Council, the Fulton County Board of Supervisors, and the Gloversville-Johnstown Joint Sewer Board. You will see that these bodies desire you to treat these comments as coming from each and all of their members.

The City of Gloversville has a population of approximately 18,000 persons and the City of Johnstown has a population of approximately 9,000 persons. Fulton County, within which they are located, has a total population of approximately 50,000 persons within the area of 533 square miles. The economic base of Fulton County is nearly entirely dependent on the manufacturing jobs located within the two Cities and has been declining for many years. There are no significant State or Federal installations and no large institutional employers. Somewhat more than half of the manufacturing jobs are in the leather industry, and these are primarily in tanneries. There are also textile dyeing and finishing plants and miscellaneous individual factories producing adhesives, phonograph records, refrigeration equipment, and marine hardware. Present records indicate that most of the thirty factories would exceed the 50,000 gallons per day sanitary waste equivalent cut-off. In fact, the primary reason for these firms to be located in Fulton County is the excellent quality and quantity of water available for industrial use.

KNOWN THROUGHOUT THE WORLD FOR GLOVE TANNAGE LEATHERS

The relatively large number of firms may be misleading in that nearly all are small businesses within their respective industrial classifications. In fact, Fulton County was designated as an "Area of Substantial Unemployment-Labor Surplus Area" by the Assistant Secretary of Labor for Employment and Training as noted in the Federal Register of June 13, 1980. Even more significant is the fact that Fulton County has been so listed for nearly every year since 1960. Additionally, the City of Gloversville has been and continues to be certified as exceeding the minimum levels of physical and economic distress for Small Cities pursuant to the Department of Housing and Urban Development UDAG Program.

The Gloversville-Johnstown Joint Wastewater Treatment Facility is currently involved in an upgrading and expansion under the 201 Program. Step 1, Facility Planning, was begun in 1978 and will not be completed until late 1981 or early 1982. The reasons for these delays are being stated in comments being submitted by Stearns & Wheler, our consulting engineers (copy attached). As a result, our financing of the improvements will bear the full impact of Public Law 96-483. By the enclosed table of flow and other waste treatment criteria, you will see that our Facility is essentially an industrial plant. From a population base of less than 30,000 persons comes an average flow of 8.6 million gallons per day, a BOD loading averaging 49,059 pounds per day, and a solids loading averaging 54,725 pounds per day. This compares with an expected loading of domestic sewage, based on population alone, of 3.0 million gallons per day, and 3,500 pounds per day of BOD, and 5,880 pounds per day of solids. The portion attributable to industrial use is thus 65% on flow, 93% on BOD, and 89% on solids, or 82.3% overall.

To understand the magnitude of the impact it is necessary to compare the Federal share before and after the passage of Public Law 96-483. Our consulting engineers made a preliminary cost estimate of $25,000,000 in the first quarter of 1979. A Federal share at 75% of the total would be $18,750,000. If just the 17.7% of domestic use is funded at 75% the Federal share would be only $3,318,750. This is a difference of $15,431,250! This is over 60% of the cost of upgrading!

What we have in our community is a potential crisis of overwhelming proportions. Could we expect small family-owned corporations to commit themselves to waste-treatment allocations of greater dollar value than their own physical plant and equipment? Yet we would be forced by NPDES enforcement to drive them away if we chose not to upgrade. Gloversville and Johnstown's combined sewer budgets exceed $2 million for 1981. O&M costs, existing debt service, on-going engineering fees, and other related costs are covered therein and will continue. Bonding all the non-Federal costs of upgrading at current interest rates of 9% or more will double these budgets. We would be particularly likely to have a domino effect. If one firm left, the costs to the remaining would increase.

Gradually at first and accelerating with time the costs would climb beyond the resources of even the strongest firms.

I have complained many times about the tendency of Federal Laws and Regulations to make Grantees the executioner of jobs in their own community. The passing of the carrot of funding assistance always brings the passing of the stick of enforcement, be it pretreatment, inflow elimination, ICR, or whatever. Now we are even losing the carrot! Is there something wrong with a City depending on manufacturing jobs? Are we supposed to eliminate any jobs we have outside the commercial and service fields? Why must there be a bias against a City which has good water resources? Why must my City die to save a few pennies for a retiree in the Sunbelt?

I will be instructing every City Department to be prepared to submit any additional information requested. I will send any City Official or travel myself to any forum that wants to hear of our plight. I want to be certain that the constructors of this guillotine poised over the future of Gloversville and Johnstown understand what they have done.

Normally I would close my comments with a stock phrase expressing trust in the reader's good judgement, but this time I cannot. Instead I must pray and plead that anyone reading this letter will help to change this unjust law. Please help save Gloversville and Johnstown from an economic disaster! Please help us survive!

Sincerely,

Louis Nicolella

Louis Nicolella
Mayor

LN:md
enc.

cc: The President of the United States
Hon. Daniel Patrick Moynihan, U.S. Senate
Hon. Alfonse D'Amato, U.S. Senate
Hon. Donald Mitchell, U.S. House of Representatives
Hon. Robert Flacke, Commissioner, N.Y.S.D.E.C.

Milwaukee Metropolitan Sewerage District
735 North Water Street Milwaukee, Wisconsin 53202
414·278·3958

December 30, 1980

Thomas A. Whalen
Industrial Users Study
Municipal Construction Division (WH-547)
Room 1217A
401 M Street, S.W.
Washington, D.C. 20460

Dear Mr. Whalen:

The following comments are submitted by the Milwaukee Metropolitan Sewerage District in response to your request for comments (1 December 1980 Federal Register, 79573) on Section 3 of P.L. 96-483 (Stafford Amendment).

The Stafford Amendment will disrupt the planning and implementation of the District's Water Pollution Abatement Program and is potentially devastating to the wet industries and/or taxpayers in the District's service area.

Cost

Although the impact of the Stafford Amendment cannot be precisely determined until the regulations implementing the Amendment are known, preliminary calculations establish, without doubt, the gravity of its potential impact.

The added local cost due to the Stafford Amendment (whether charged directly to industry or financed by all users via the property tax) is estimated at about $114 million (1980 dollars--financing costs not included). If industry were direct-billed or assessed for non-eligible industrial capacity, the 10 major wet industries in the District would bear up to $81 million of that total. Faced with added costs ranging from $1.2 million to $25 million, many of these 10 industries would be hard pressed to justify expansion and/or continued operation in the Milwaukee area. The added costs to the 90-100 other industries affected by the Stafford Amendment could likewise mean the difference in their continued viability.

If the $114 million in non-grant-eligible costs were financed through local taxes, area taxpayers would absorb an approximate 10-1/2% increase in the local costs currently estimated. The local share for the Milwaukee Water Pollution Abatement Program is currently estimated at $1.1 billion.

Metropolitan Sewerage District of the County of Milwaukee
Sewerage Commission of the City of Milwaukee
Metropolitan Sewerage Commission of the County of Milwaukee

Lest the 10-1/2% increase seem in any way acceptable, it must be understood the current court-ordered Water Pollution Abatement Program will already more than quadruple the current tax rate for Sewerage District capital charges. In addition, it should be noted that the County of Milwaukee has taken the position that current estimates of District capital needs will probably cause it to exceed the statutory debt limit of the County. An additional increase of 10-1/2% in capital requirements will only serve to further aggravate the impact of pollution abatement costs on homeowners, particularly the low and fixed income homeowners who could be forced from their homes by the increase.

Administrative Impacts

The increase in local costs has been calculated using known industrial flows and waste strengths. The Stafford Amendment also carries with it significant additional administrative costs which cannot yet be quantified. The following types of administrative problems will further increase costs and, at the same time, drain valuable staff time from the tightly scheduled Water Pollution Abatement Program currently at hand:

- Added man-hours for project design and grant application needed to segregate industrial capacity in each project.

- Added manpower and equipment to verify industrial flows and waste strengths.

- Added manhours/legal costs to resolve disputes regarding flow and waste strengths used to exempt industrial capacity from Stafford Amendment requirements and regarding capital cost distribution challenges by industry.

- Added manhours to evaluate alternatives for financing non-eligible industrial capacity—i.e., adding costs to tax rolls, bonding, or direct billing or assessing industrial users. Using special assessments would involve a large number of manhours to prepare and collect assessments and to resolve resultant disputes and litigation.

- Added manhours (and possible tax increases) to resolve the administrative problems involved in reallocating costs when an affected industry either leaves or moves into the District.

Overall Concerns

Besides added costs and administrative difficulties, the Stafford Amendment has significant drawbacks as an alternative approach to Industrial Cost Recovery (ICR). Among its shortcomings are the following:

- The Stafford Amendment is much more harsh (both on local communities and industries) than the original ICR. It does not provide for local administrative costs and thus, in effect, taxes local communities in order to save Federal grant dollars.

- The Stafford Amendment is particularly damaging to older industrial cities. Enormous unanticipated charges for sewerage capacity will only aggravate the flight of industry from cities which sorely need to preserve their tax bases. Increasingly burdened taxpayers will likewise be encouraged to flee from districts facing large sewerage projects. The net effect of the Stafford Amendment may well be to reduce the sources of local funds available for cleaning up the Nation's waters.

- The Stafford Amendment provides yet another example of retroactivity — a regulatory approach which Congress has specifically told EPA to avoid. An assumption which seems to underlie the Stafford Amendment is that if design of a project has not started, then the disruption caused by this regulatory change is acceptable. It is not acceptable. EPA and Congress must realize that the planning for large, complex projects such as the District's is not easily/quickly restructured in the face of new or altered regulations. Over two years of planning have been recently completed, all based upon regulations which did not include the Stafford Amendment. The cost of a delay in the District's construction program is estimated to be in excess of $300,000 per day — in inflationary costs alone. If projected industrial loadings change significantly as a result of the Stafford Amendment, significant — and costly — planning revisions could be required. Thus, much of the grant money EPA avoids paying for industrial capacity could be spent on added planning to comply with the Stafford Amendment.

In summary, the District strongly urges that Congress repeal the Stafford Amendment at the earliest possible date. The goal of cleaning up the Nation's waters will only be further delayed and frustrated by the Amendment's implementation.

If I can provide any additional information, or clarify any of the above comments, please do not hesitate to contact me.

Sincerely,

for Thomas F. Wolf
Acting Executive Director

TFW/DL/sa

3284A

EXHIBIT A

Company	Estimated Additional Cost to Industries to Replace Federal Share of Construction Grant (1)
Green Giant Co.	$1,780,000
Watsonville Canning Co.	1,390,000
Del Mar Foods	912,000
Ametek	867,000
Richard A. Shaw Co.	690,000
J.M. Smucker Co.	489,000
J.J. Crosetti	477,000
S. Martinelli & Sons	453,000
John Inglis Frozen Foods	363,000
Coast Counties Canning Co.	327,000
Mt. Madonna Apple Co.	111,000
Frank Oliver and Son	105,000
Paul Miura Apple Co.	99,000
Meadow Gold	81,000
H.R. Valentine	42,000
Speas	39,000
Heinz	33,000
Total	$8,258,000

(1) 1979 dollars (ENR 3600); Wastewater Treatment Plant improvements to meet California Ocean Plan standards; includes only funds to replace 75% federal grant and assumes that State grants (12½%) are still available.

IV. FUNDING ALTERNATIVES

The appropriate degree of Federal and non-Federal participation in the funding of publicly owned treatment works.

IV. FUNDING ALTERNATIVES

The purpose of this section is to respond to the request of Congress to include in the ICR report a consideration of the appropriate degree of Federal and non-Federal participation in the funding of publicly owned treatment works. In dealing with this request, EPA has developed a series of possible alternatives which are intended to reflect the concerns of the many parties involved in this issue. The list of alternatives is not intended to be exhaustive or exclusive. The absence of an alternative from this list does not mean that EPA would view it with disfavor. Furthermore, the list does not indicate a preference for any particular action, but is intended to present a range of possible alternatives, along with their probable impacts. It should also be noted that this list is limited to consideration of alternatives in the context of current project category eligibilities and a 75 percent Federal share. Changes in eligibility or Federal share are not addressed.

The alternatives to ICR are identified below and briefly characterized. They are grouped according to those which would retain ICE but modify its provisions and those which would replace ICE with different requirements.

Retain ICE, But Modify Provisions

1. Retain ICE, but do not apply it to any Step 3 project proposed by a grantee which is the result of carrying out an approved Step 1 project to plan a facility to treat wastewater, when the grantee received the Step 1 approval before a specified date.

- This alternative delays implementation of ICE to avoid disrupting the planning/construction process where facility planning is well under way.
- Costs of delay and replanning would be eliminated for active projects which missed or will miss the current deadlines.
- Costs to the Federal government would depend on the cut-off date specified for Step 1, but presumably most of the dollars identified under short-term effects in this report (approximately $1.2 billion) would revert to Federal funding.
- In the long run, ICE would be fully implemented, but communities and industries would be given more time to plan for and adjust to its impacts.

2. Retain ICE, but modify Section 213 of the Water Pollution Control Act to provide loan guarantees to municipalities for that portion of the POTW constructed to serve major industrial users. The interest rate should not exceed that of the Dow-Jones municipal average rate. The municipality should be required to implement a local capital recovery system based on letters of intent from major industrial users.

- This alternative ensures that the implementation of ICE does not prevent the construction of POTWs where the per capita cost impact of the industrial user portion is great.

- The loan guarantee provision could be limited to communities where the per capita cost impacts of ICE are great, and could be tied to ability to pay.

- The suggested provision for a local capital recovery system ensures that local costs for the industrial portion are borne by industrial users.

3. Retain ICE, but increase the Federal assistance available to industrial users of POTWs from other Federal agencies that deal with industrial development (e.g., Department of Commerce, Small Business Administration).

- This alternative focuses financial help on individual industrial users who may need some assistance if required to raise capital for participation in a POTW. For some industries, self-treatment is not a viable alternative.

- Federal costs would depend on the degree of assistance given, but would be much less than funding industrial capacity across the board.

- Federal and grantee administrative costs would probably increase due to involvement of additional Federal agencies and implementation of guidelines on a case-by-case basis to determine the eligibility of each industrial user for Federal assistance.

4. Retain ICE, but provide that POTW capacity for treatment of waste by industrial users be funded by the industrial users, without financial assistance from the grantee.

- This alternative prevents municipalities from subsidizing industrial use of POTWs at the expense of residential and commercial users. The concept of "proportionality," now a required part of user charge systems, would be expanded to capital costs as well.

- Federal costs would not be increased under this alternative.

5. Retain ICE, but reduce or eliminate current tax incentives available for pollution control investments (five-year amortization pollution control expenditures and use of industrial development bonds).

- This alternative increases the cost of self-treatment, making it comparable to the increased costs of joint treatment under ICE, and thus eliminating possible economic disadvantage for those unable to self-treat because of location.

- Cost to industrial dischargers would increase, as would tax revenues to the Federal government.

- True cost equity between direct and indirect dischargers is difficult to establish because costs vary greatly from one local situation to another.

Replace ICE

6. Repeal ICE so that industrial capacity could be funded, but do not reinstitute the ICR requirement.

- The purpose of this alternative is to fund treatment of industrial flow on the same basis as waste from commercial and domestic sources.

- Federal costs would be greater than under either ICE or ICR, but the additional grant funds would be partially offset by increased corporate income tax revenues from improved corporate earnings, as expenses associated with ICE or ICR would no longer be used to reduce taxable earnings.

- This would shift the cost balance in favor of joint treatment for some industries, but not all. For many industrial users, particularly large-volume users, the user charge rate would still be the primary determinant.

- The administrative complexity of ICE and the costs of delay from its implementation would be avoided.

7. Replace ICE with a requirement that all users of a POTW make debt service payments proportionate to their use of the POTW. (About 70 percent of our grantees already comply with this proposed requirement.)

- The purpose of this alternative is to fund industrial waste on the same basis as waste from commercial and domestic sources, and to ensure that industrial users are not subsidized by other users in debt service payments.

- Present law requires proportionality in user charge systems, but not debt service charges. Some grantees now use rate methods for debt service which favor larger users at the expense of smaller users.

- The proposed requirement, in furthering proportionality, would require approximately 30 percent of grantees to develop new debt service charge systems. As a result, many grantees would need to alter their method of financing the local share of POTW construction costs.

8. Replace ICE with a requirement that all industrial users of a Federally assisted POTW pay a uniform charge for process wastewater discharged (e.g., two cents per thousand gallons), with all collections, audits, and enforcement proceedings being undertaken by the Treasury Department, and all revenues being deposited in the U.S. Treasury. The rate could be set at a level necessary to recover, nationwide, the same amount that would have been recovered by the previous ICR requirement, estimated to average $60 million per year.

- This alternative recovers, at a uniform national rate, a portion of the Federal funding for treatment of industrial wastewater, and equalizes capital share costs to industrial users of POTWs.
- Under the ICE requirement, costs for industrial users vary greatly from community to community, depending upon such factors as economy of scale, seasonal versus uniform discharges, and the level of treatment required--secondary or advanced. A uniform charge based on flow would equalize these factors.
- A charge based solely on flow would encourage water conservation to a greater extent than charges which are also based on pollutant loadings.
- Administration of a uniform national recovery charge would be simpler and less costly than ICE or the old ICR system.
- This alternative would place the cost recovery program in the Treasury Department, the logical agency to administer a revenue program.

9. Repeal ICE and modify the user charge proportionality requirement to allow grantees to charge higher rates to large-volume users.

- The purpose of this alternative is to fund treatment of industrial flow on the same basis as waste from commercial and domestic sources, and to give grantees added flexibility in developing user charge systems.
- The higher rates permitted for large-volume users would encourage water conservation and would permit grantees who have already instituted this measure for water users to develop compatible requirements for POTW users.

10. Replace ICE with a requirement that each grantee develop and implement a long-term financial plan for reconstruction and expansion of the existing and/or proposed wastewater treatment facilities. This requirement could apply to all new grants, as well as to previous grants where grantees wish to be exempt from the requirement for proportionate recovery of local capital costs under Public Law 84-660.

- The purpose of this alternative is to fund treatment of industrial flow on the same basis as waste from commercial and domestic sources, and to foster complete local economic self-sufficiency for POTWs in the future.

- The long-term financial plan could identify for the grantee future costs for reconstruction and expansion with sufficient lead time so that the local community could make arrangements for raising the capital costs.

- Once the long-range financial requirements are known, this knowledge could spur both grantees and users to undertake more extensive water conservation measures, thus reducing future construction expenditures.

- Although administrative costs related to ICE would be eliminated, there would be additional costs in administering the requirement for a long-term financial plan.

V. NATIONAL EFFECT

Analysis of communities affected by the Industrial Cost Exclusion in each State.

V. NATIONAL EFFECT

For the States that provided comprehensive data to us directly, or indirectly through the Regional Offices of the Environmental Protection Agency (EPA), the analysis is divided into two sections. The first section, the short-term effect, is an analysis of those publicly owned treatment works that may be constructed prior to 1985. The second section, the long-term effect, is an estimate of those facilities that are needed during the years 1985 to 2000.

In the short-term effect section we have provided an analysis of the population, flow into publicly owned treatment works, and construction costs that may be affected by the Industrial Cost Exclusion prior to 1985. The largest industrial groups that may be affected in each State are noted. Also noted are the total industrial flow and the total cost of constructing the industrial portion of the publicly owned treatment works in each State. The industries that are affected are contained in Division A, and D, E or I of the Standard Industrial Classification Manual. Also, we have provided a list of the specific communities that may be affected, their population, and the estimated cost of constructing the industrial portion of the planned publicly owned treatment works.

The population of each community is the latest estimate available or from the 1970 Census. The unemployment data are based upon the October 1980 unemployment rate for the county in which the community is located.

In the long-term effect section we have provided an estimate, based upon the 1980 Needs Survey, of the number of facilities that may be affected between the years 1985 and 2000. For the purpose of this report, an estimate of the number of facilities and cost that may be affected, rather than the name, is important to quantify the potential effect of the Industrial Cost Exclusion.

Because the Needs Survey contains industrial flow rather than users of each facility, the analysis is based upon those facilities that have future pollution control needs and substantial present industrial flow. Substantial industrial flow is considered in this study to be an excess of 100,000 gallons per day and over 16 percent of the total flow into the publicly owned treatment works. The 16 percent figure approximates the proportion of industrial capacity that has been constructed in publicly owned treatment works since the inception of the construction grants program. The basis for the estimate of the cost of construction is the cost of previous comparable construction, the consultants' preliminary estimate, or an EPA cost estimating procedure. The estimate of the number of communities under 10,000 population that may be affected is provided because they have been determined to be eligible for Farmers Home Administration loan or grant funds.

INDUSTRIAL COST EXCLUSION (ICE)
ESTIMATE OF NATIONAL EFFECT

When statistical data are taken from a large population, observed behavior becomes more uniform and sample observations more accurately reflect the true population.

For this report, the percentage of cumulative construction grant allotments for each State represents an accurate estimate of the relative level of other populations, i.e., percentage of industrial establishments and percentage of human population. It follows that the cumulative allotment percentage indicates the percentage effect of the Industrial Cost Exclusion, since there is a correlation between percentage of allotments, census population, and industrial establishments. There would also be a logical relationship between percentage of cumulative allotments, industrial/municipal wastewater flow, and the grant funds to be excluded due to major industrial users.

Correlation

	*1980 Population	*No. Industrial Establishments	**Cumulative Allotments
Penna.	11.866×10^6	18,735	$\$1,562.7 \times 10^6$
Nation	226.5×10^6	359,928	$31,580 \times 10^6$
%	5.2	5.2	***4.59

*Bureau of Census **Clean Water Fact Sheet Dec. 1980

***If 4.95 percent were adjusted upward for Talmadge/Nunn, it would approach 5.2 percent.

If one State out of fifty correlates this well, then a region or the Nation may correlate equally well. In the EPA's Region III, a survey indicated that $54.8 million per year of industrial funding would be excluded if one assumes an appropriation of $500 million per year for the region. This suggests a national industrial cost exclusion of $430 million at an assumed one-year national appropriation of $3.925 billion. Put another way, 10.955 percent of any appropriation would be excluded.

Conclusion

Estimated Size of Industrial Cost Exclusion

Annual Appropriation	Nationwide Industrial Cost Exclusion
$2.3 billion	$253 million
$2.4	$264
$2.5	$275
$3.3	$363
$3.4	$374
$3.5	$385

UNITED STATES OF AMERICA

I. Short Term Effect (From State Reported Data and Excluding Missouri and Nebraska)

A. Overview

Four hundred two communities ranging in size from 600 to over 3,500,000 with an average population of 97,900 will be affected. The population of all the communities affected is over 39,274,000. The daily flow into the affected POTW's is 7,920 mgd of which 1,254 mgd or 16 percent is contributed by 3,288 affected industrial users. The estimated POTW construction cost is $8.16 billion of which the industrial share is $1.26 billion or 15 percent. The largest industrial groups impacted are:

(1) Food and Kindred, 228 mgd, $293 million,
(2) Fabricated Metals, 46 mgd, $96 million,
(3) Chemical and Allied Products, 66 mgd, $67 million,
(4) Electrical and Electronic Machinery, 29 mgd, $58 million,
(5) Transportation Equipment, 46 mgd, $55 million,
(6) Textile Mill Products, 33 mgd, $37 million.

B. Communities with populations less than 100,000

Three hundred thirty-three communities ranging in size from 600 to 100,000 with an average population of 24,800 will be affected. The population of all the communities affected is over 8,244,500. The daily flow into the affected POTW's is 2,154 mgd of which 421 mgd or 20 percent is contributed by 1,065 affected industrial users. The estimated POTW construction cost is $3.1 billion of which the industrial share is $.5 billion or 16 percent. The largest industrial groups impacted are:

(1) Food and Kindred Products, 116 mgd, $161 million,
(2) Electrical and Electronic Machinery, 16 mgd, $42 million,
(3) Textile Mill Products, 24 mgd, $30 million,
(4) Fabricated Metals, 18 mgd, $22 million,
(5) Chemical and Allied Products, 18 mgd, $22 million,
(6) Transportation Equipment, 20 mgd, $20 million.

C. Communities with populations between 100,000 and 1,000,000

Sixty-five communities ranging in size from 100,000 and 919,000 with an average population of over 318,000 will be affected. The population of all the communities affected is over 20,689,000. This daily flow into the affected POTW's is 4,575 mgd of which 670 mgd or 15 percent is contributed by 1,499 affected industrial users. The estimated POTW construction cost is $4.54 billion of which the industrial share is over $.7 billion or 16 percent. The largest industrial groupings are:

(1) Food and Kindred Products, 104 mgd, $128 million,
(2) Fabricated Metals, 26 mgd, $72 million,
(3) Chemical and Allied Products, 44 mgd, $42 million,
(4) Transportation Equipment, 26 mgd, $34 million,
(5) Paper and Allied Products, 49 mgd, $17 million,
(6) Electrical and Electronics Machinery, 13 mgd, $16 million.

D. Communities with populations over 1,000,000

Four communities ranging in size from 1,040,000 to 3,500,000, with an average population of 2,585,000, will be affected. The population of all the communities affected is over 10,340,000. The daily flow into the affected POTW's is 1,190 mgd of which 133 mgd, or 11 percent is contributed by 724 affected industrial users. The estimated POTW construction cost is $517 million of which the industrial share is $44 million, or 9%. The largest industrial groups impacted are:

(1) Food and Kindred, 8 mgd, $4 million,
(2) Petroleum and Coal Products, 15 mgd, $3 million,
(3) Chemical and Allied Products, 4 mgd, $2 million,
(4) Fabricated Metals, 3 mgd, $2 million,
(5) Paper and Allied Products, 3 mgd, $2 million,
(6) Primary Metal Products, 2 mgd, $.5 million.

National Summary
(Excluding Missouri and Nebraska)

I. Short-Term Effect (From State Reported Data)

Number of communities affected 402

Communities	Number of Communities	Population	Industrial Portion
0 - 3,500	56(13.9%)	120,300(.3%)	47,441,000(3.6%)
3,600 - 10,000	71(17.7%)	487,700(1.3%)	66,867,000(5.1%)
10,100 - 50,000	156(38.8%)	3,747,000(9.6%)	291,113,000(22.3%)
50,000 - 100,000	50(12.4%)	3,550,000(9.1%)	118,093,000(9.0%)
100,100 - 500,000	51(12.7%)	11,096,000(28.6%)	421,042,000(32.2%)
500,100 - 1,000,000	14(3.5%)	9,537,900(24.5%)	300,837,000(23.0%)
over - 1,000,000	4(1.0%)	10,340,100(26.6%)	62,422,000(4.8%)
Total Affected	402 100.0%	38,879,000 100.0%	1,307,415,000 100.0%

Communities that exceed specified unemployment rate (National rate = 7.1%)

+	Exceed State rate yet below National rate	37
++	Exceed National rate	123
+++	Exceed State rate which exceeds National	61

POTW flow affected 7,919.8 Million Gallons per Day
Industrial flow 1,254.3 Million Gallons per Day 15.8% of POTW flow

POTW construction cost affected $8,158.9 Millions
Industrial portion $1,307.4 Millions 16% of POTW cost

Average industrial cost $ 3.25 Millions per community
Average industrial cost $33.63 per person
Average industrial cost $92.48 per household

II. Long-Term Effect (From EPA Needs Survey)

Total needed facilities with substantial industrial flow 1,382
Needed facilities serving less than 10,000 population 764 55% of total
POTW construction cost $16.338 Billions
Industrial portion $3.538 Billions 22% of POTW cost

ESTIMATE OF PERCENTAGES TO BE AFFECTED

402 Communities were reported by States as being affected:
83% of those reporting were from communities of less than 100,000
70% of those reporting were from communities of less than 50,000
32% of those reporting were from communities of less than 10,000

38,879,000 Total population affected as reported
20% of those reporting were from communities of less than 100,000
11% of those reporting were from communities of less than 50,000
2% of those reporting were from communities of less than 10,000

$1,307,444,000 Total industrial cost as reported
38% of those reporting were from communities of less than 100,000
31% of those reporting were from communities of less than 50,000
9% of those reporting were from communities of less than 10,000

32% of reported affected industrial users are in communities of less than 100,000
38% of reported affected POTW costs are in communities of less than 100,000
27% of reported affected POTW flows are in communities of less than 100,000
34% of reported affected IND flows are in communities of less than 100,000

THE MAJOR INDUSTRIAL GROUPS AFFECTED BY THE INDUSTRIAL COST EXCLUSION
(Based upon State reported data)

	Major Industrial Group	Amount	% of Total
1)	Food and Kindred Products	549,000,000	42
2)	Fabricate Metal Products	183,000,000	14
3)	Chemical and Allied Products	130,700,000	10
4)	Electrical and Electronic Equipment	117,700,000	9
5)	Transportation Equipment	104,600,000	8
6)	Textile Mill Products	65,400,000	5
7)	Paper and Allied Products	52,300,000	4
8)	Machinery except Electrical	39,200,000	3
9)	Primary Metal Industries	26,100,000	2
10)	Leather and Leather Products	13,100,000	1
11)	Rubber and Plastic	13,100,000	1
12)	Petroleum and Coal Products	13,100,000	1
		1,307,400,000	100

NATIONALLY REPORTED AFFECTED INDUSTRIAL GROUPING

		Cost	Flow	Cost/Flow and	Rank
1)	Food	$293,210,000	227.53 mgd	$1.29 per gpd	(8)
2)	Fab Met	95,600,000	46.14	2.07	(11)
3)	Elect	57,880,000	29.06	1.99	(10)
4)	Chem	64,740,000	65.42	.99	(3)
5)	Trnspt	54,640,000	46.37	1.18	(7)
6)	Text Mill	34,800,000	32.00	1.09	(4)
7)	Paper	24,100,000	87.73	.27	(2)
8)	Mach	17,900,000	12.60	1.42	(9)
9)	Prim Met	16,180,000	14.03	1.15	(5)
10)	Leather	7,300,000	2.40	3.04	(12)
11)	Rubber	6,890,000	5.98	1.15	(6)
12)	Petro	3,540,000	18.16	.19	(1)
		$676,780,000	587.42 mgd	$1.15 per gpd	

COMPOSITE OF INDIVIDUAL POPULATION CATEGORIES

	Less than 100,000	100,000 to 1,000,000	Greater than 1,000,000	Average
Population per community	24,800	318,292	2,585,000	97,697
Population per industrial user	7,741	13,802	14,282	11,945
Industrial users per community	3.2	23	181	8.2
POTW flow per population	261 gpd/person	221 gpd/person	115 gpd/person	202 gpd/person
Industrial flow per population	51 gpd/person	39 gpd/person	13 gpd/person	32 gpd/person
POTW cost per population	$376 /person	$220 /person	$50 /person	$208 /person
Industrial cost per population	$62 /person	$34 /person	$13 /person	$32 /person
POTW cost per community	$9,314,000	$69,850,000	$129,250,000	$20,296,000
Industrial cost per community	$1,526,000	$10,950,000	$11,100,000	$3,145,000
POTW cost per POTW flow	$1.44 /gpd	$.99 /gpd	$.43 /gpd	$1.03 /gpd
Industrial cost per industrial flow	$1.21 /gpd	$1.02 /gpd	$.33 /gpd	$1.00 /gpd

STATE OF ALASKA

It has been reported that the communities and industries in Alaska will not be affected by the industrial cost exclusion.

STATE OF ALABAMA

I. Short Term Effect (From State Reported Data)

Five communities, ranging in size from 14,000 to 36,000 with an average population of 24,600, will be affected. The combined population of the communities affected is over 123,000. The daily flow into the affected POTWs is 40 mgd of which 3 mgd, or 8 percent, is contributed by 11 affected industrial users. The estimated POTW construction cost is $87 million of which the industrial portion is over $3 million. The largest industrial groups affected are:

(1) Food and Kindred Products, 1 mgd, $1 million,
(2) Textile Mill Products, 1 mgd, $1 million,
(3) Primary Metal Industries, .5 mgd, $.8 million.

Community	Population	Industrial Portion
+++Anniston	31,000	$1,130,000
+++Boaz	14,000	1,200,000
+++Cullman	22,000	789,000
+++Gadsen	36,000	1,000,000
Opelika	20,000	472,000
TOTAL	123,000	$4,591,000

+++ Exceeds State unemployment rate of 8.7% which exceeds the National rate.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 28 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $84 million of which the industrial portion would be $29 million, or 35 percent. Of these 28 needed facilities, 15, or 54 percent, will serve communities with populations of less than 10,000.

III. Potential Effects (Data from Other Sources)

Various public and/or private sources have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
++Chatoon	1,000	?
+++Gadsen	54,000	?
+++Livingston	3,500	?
TOTAL	58,500	?

++ Exceeds National unemployment rate of 7.1%.
+++ Exceeds State unemployment rate of 8.7% which exceeds the National rate.

STATE OF ARKANSAS

I. Short Term Effect (From State Reported Data)

The Little Rock metropolitan area, with a population of 168,500, and 25 smaller communities, ranging in size from 1,000 to 86,000, will be affected. The combined population of the communities affected is over 670,000. The Little Rock area POTW has a daily flow of 18 mgd of which 2 mgd, or 11 percent, is contributed by 13 affected industrial users. The 25 smaller communities have a daily flow of 93 mgd with 70 impacted industrial users contributing 26 percent, or 24 mgd, of the total flow. The combined estimated POTW construction cost is $162 million of which the industrial portion is $34 million. The cost in Little Rock is $30 million, with an industrial portion of $3 million; the 25 smaller communities have a POTW construction cost of $132 million of which the industrial portion is $32 million. The largest industrial groups affected are:

A. In Little Rock,

Food and Kindred Products, 1 mgd, $2 million,

B. In the 25 remaining communities,

Food and Kindred Products, 19 mgd, $25 million.

Community	Population	Industrial Portion	Community	Population	Industrial Portion
+++Alma	1,600	$ 380,000	++Monticello	12,600	$ 760,000
Atkins	4,000	180,000	++Morrilton	6,800	335,000
Bentonville	19,500	1,370,000	Murphysboro	1,400	840,000
Berryville	4,500	900,000	Nashville	6,500	770,000
Clarksville	4,600	310,000	N. Little Rock	73,000	203,000
+++Clinton	1,000	670,000	Rogers	20,000	2,460,000
Decatur	3,000	650,000	Siloam Spring	15,000	234,000
Dequeen	3,900	1,030,000	Pine Bluff	57,500	5,700,000
Fayetteville	31,000	2,870,000	Springdale	51,000	5,930,000
Harrison	7,200	150,000	Stuttgart	10,500	120,000
Huntsville	2,600	870,000	+++Texarkana	86,000	1,224,000
Jonesboro	25,000	1,530,000	+++Van Buren	8,500	900,000
Little Rock	168,500	2,700,000	West Memphis	45,500	420,000
			TOTAL	670,700	$33,436,000

++ Exceeds National unemployment rate of 7.1%.
+++ Exceeds State unemployment rate of 7.3% which exceeds the National rate.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 33 needed facilities (treatment plants and interceptors) each have substantial industrial flows. That is eash has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $80 million of which the industrial portion would be $20 million or 25 percent. Of the 33 needed facilities, 23 will serve communities with populations of less than 10,000.

STATE OF ARIZONA

I. Short Term Effect (From State Reported Data)

The Phoenix metropolitan area, with a population of 919,000, and 3 smaller communities, ranging in size from 18,000 to 35,000, will be affected. The combined population of the communities affected is over 1,000,000. The Phoenix area POTWs has a daily flow of 128 mgd of which 10 mgd, or 8 percent, is contributed by 39 affected industrial users. The three smaller communities have a daily flow of 11 mgd with 10 impacted industrial users contributing 30 percent, or 3 mgd, of the total flow. The estimated POTW construction cost is $83 million of which the industrial portion is $10 million. The cost in Phoenix is $77 million, with an industrial portion of $6 million; the 3 smaller communities have a POTW construction cost of $14 million with 10 affected industries of which the industrial portion is $5 million. The largest industrial groups affected are:

A In Phoenix,

(1) Electrical and Electronic Machinery, 6.9 mgd, $3 million,
(2) Food and Kindred Products, 1.6 mgd, $1 million,
(3) Fabricated Metal Products and Machinery, .5 mgd, $.7 million.

B - In the three remaining communities,

(1) Electrical and Electronic Machinery, 1.4 mgd, $3 million,
(2) Fabricated Metal Products and Machinery, .6 mgd, $1 million.

Community	Population	Industrial Portion
++Casa Grande	18,000	$ 100,000
Chandler	30,000	4,400,000
++Flagstaff	35,000	900,000
Phoenix	919,000	5,200,000
TOTAL	1,002,000	$10,600,000

++ Exceeds National unemployment rate of 7.1% (Rate as of October 1980).

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that three needed facilities (treatment plants and interceptors) each have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $50 million of which the industrial portion would be $3 million or six percent. Of the three needed facilities, one will serve a community with a population of less than 10,000.

STATE OF CALIFORNIA

I. Short Term Effect (From State Reported Data)

A. Overview

Sixteen communities ranging in size from 2,500 to over 3,500,000 with an average population of 595,000 will be affected. The combined population of the communities affected is over 9,500,000. The daily flow into the affected POTWs is 1,354 mgd of which 160 mgd, or 12 percent, is contributed by over 479 affected industrial users. The estimated POTW construction cost is $563 million of which the industrial portion is $60 million, or 11 percent. The largest industrial groups affected are:

(1) Food and Kindred Products, 42 mgd, $26 million,
(2) Petroleum and Related Industries, 18 mgd, $3 million.

B. Communities with populations under 100,000

Eleven communities ranging in size from 2,500 to 75,000 with an average population of 31,000 will be affected. The combined population of these communities is over 300,000. The daily flow into the affected POTWs is 283 mgd of which 58 mgd, or 20 percent, is contributed by over 97 affected industrial users. The estimated POTW construction cost is $110 million of which the industrial portion is $30 million, or 21 percent. The largest industrial groups affected are:

(1) Food and Kindred Products, 28 mgd, $20 million,
(2) Petroleum and Related Products, 3 mgd, $.6 million.

Community	Population	Industrial Portion	Community	Population	Industrial Portion
++ Corning	5,000	$ 27,000	++Oakview	2,500	$ 100,000
++ Eureka	25,000	700,000	Orange Co.	75,000	5,100,000
++ Hughson	3,000	1,400,000	Santa Rosa	51,000	13,000
Malibu	70,000	75,000	Vacaville	22,000	950,000
++ Manteca	14,000	300,000	Watsonville	15,000	12,000,000
++ Modesto	62,000	10,100,000			
			TOTAL	344,500	$30,765,000

++ Exceeds National unemployment rate of 7.1%.

C. Communities with populations between 100,000 and 1,000,000

Three communities, ranging in size from 320,000 to 800,000, will be affected. The daily flow into the affected POTWs is 280 mgd of which 22 mgd, or 8 percent, is contributed by 61 affected industrial users. The estimated POTW construction cost is $178 million of which the industrial portion is $11 million or 6 percent. The largest industrial groups affected are:

STATE OF CALIFORNIA

(1) Food and Kindred Products, 11 mgd, $4.5 million,
(2) Petroleum and Related Industries, .1 mgd, $.1 million,
(3) Fabricated Metals, .8 mgd, $.5 million.

Community	Population	Industrial Portion
Contra Costa Co. (WCA)	320,000	$ 600,000
San Francisco (City & Co.)	800,000	1,800,000
San Jose and Santa Clara	550,000	8,200,000
TOTAL	1,670,000	$10,600,000

D. Communities with populations over 1,000,000

Los Angeles City, with a population of 3,000,000, and Los Angeles County, with a population of 3,500,000, have daily flows of 360 mgd and 430 mgd, respectively. In the City the industrial flow is 13 mgd, or 4 percent of the total flow; in the County, however, industrial flows account for 66 mgd or 15 percent of the total flow. The estimated POTW construction cost in Los Angeles City is $200 million of which the industrial portion is $7 million, or 4 percent. In Los Angeles County, POTW construction cost is estimated to be $75 million of which the industrial portion is about $12 million, or 15 percent. The largest industrial groups affected are:

(1) Petroleum and Related Industries (Co. Only), 15 mgd, $2.6 million,
(2) Food and Kindred Products (City Only) 3 mgd, $2 million.

Community	Population	Industrial Portion
++Los Angeles County	3,500,000	$11,500,000
++Los Angeles	3,000,000	7,200,000
TOTAL	7,500,000	$18,700,000

++ Exceeds National unemployment rate of 7.1%.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 83 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $1.6 billion of which the industrial portion would be $290 million or 18 percent. Of these 83 needed facilities, 35, or 42 percent, will serve communities with populations of less than 10,000.

STATE OF CALIFORNIA

III. Potential Effect (Data from Other Sources)

Various public and private sources have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
Buena Park	64,000	$?
Richmond	85,000	600,000
+San Diego	700,000	2,000,000
+Santa Cruz	33,000	?
++Ventura County	58,000	1,900,000
TOTAL	917,000	$4,500,000

+ Exceeds State unemployment rate of 6.7% which is below the National rate.

++ Exceeds National unemployment rate of 7.1%.

STATE OF COLORADO

I. Short Term Effect (From State Reported Data)

A. Overview

Nine communities, ranging in size from 5,800 to over 655,000 with an average population of 133,500, will be affected. The combined population of the communities affected is over 1,201,000. The daily flow into the affected POTWs is 220 mgd of which 10 mgd, or 5 percent, is contributed by 11 affected industrial users. The estimated POTW construction cost is $158 million of which the industrial portion is $7 million, or 4 percent. The largest industrial groups affected are:

(1) Food and Kindred Products, 2 mgd, $6 million,
(2) Electrical and Electronic Machinery, .6 mgd, $.8 million.

B. Communities with populations under 100,000

Six communities, ranging in size from 5,800 to 64,000 with an average population of over 34,000, will be affected. The combined population of these communities is over 204,800. The daily flow into the affected POTWs is 28 mgd of which 1.4 mgd, or 5 percent, is contributed by 6 affected industrial users. The estimated POTW construction cost is $86 million of which the industrial portion is $6 million, or 7 percent. The largest industrial groups affected are:

(1) Food and Kindred Products, 1 mgd, $5 million,
(2) Electrical and Electronic Machinery, .4 mgd, $.4 million.

Community	Population	Industrial Portion
Broomfield	57,000	$ 230,000
+Delta	5,800	470,000
+Fort Morgan	8,000	750,000
+Greeley	40,000	2,530,000
++Montrose	30,000	1,600,000
+Westminister	64,000	120,000
TOTAL	204,800	$5,700,000

+ Exceeds State unemployment rate of 6.3% which is below the National rate.
++ Exceeds National unemployment rate of 7.1%.

C. Communities with populations between 100,000 and 1,000,000

Three communities, ranging in size from 110,000 to 655,000, will be affected. The daily flow into the affected POTWs is 192 mgd of which 9 mgd, or 4 percent, is contributed by 5 affected industrial users. The estimated POTW construction cost is $72 million of which the industrial portion is over $5 million or 6 percent. The largest industrial group affected is Food and Kindred Products, .9 mgd, $.9 million.

STATE OF COLORADO

Community	Population	Industrial Portion
++Colorado Springs	232,000	$ 306,000
+Denver	655,000	1,950,000
++Pueblo	110,000	800,000
TOTAL	997,000	$3,056,000

+ Exceeds State unemployment rate of 6.3% which is below the National rate.
++ Exceeds National unemployment rate of 7.1%.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 15 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $110 million of which the industrial portion would be $14 million or 13 percent. Of these 15 needed facilities, 9, or 60 percent, will serve communities with populations of less than 10,000.

STATE OF CONNECTICUT

I. Short Term Effect (From State Reported Data)

The New Haven metropolitan area, with a population of 138,000, and six smaller communities, ranging in size from 9,000 to 60,000, will be affected. The combined population of the communities affected is over 327,000. The New Haven area POTW has a daily flow of 34 mgd of which 1 mgd, or 4 percent, is contributed by 3 affected industrial users. The six smaller communities have a daily flow of 30 mgd with over 12 impacted industrial users contributing 7 percent, or 2 mgd, of the total flow. The estimated POTW construction cost is $91 million of which the industrial portion is $6.0 million. The cost in New Haven is $30 million, with an industrial portion of $1 million; the six smaller communities have a POTW construction cost of $61 million of which the industrial portion is $5 million. The largest industrial groups affected are:

A. In New Haven,

(1) Fabricated Metal Products, 1 mgd, $.9 million,
(2) Paper and Allied Products, .3 mgd, $.2 million,

B. In the six remaining communities,

(1) Food and Kindred Products, .6 mgd, $1 million,
(2) Chemicals and Allied Products, .6 mgd, $.7 million.

Community	Population	Industrial Portion
Manchester	50,000	$2,060,000
Milford	60,000	100,000
+New Haven	138,000	1,170,000
North Haven	15,000	390,000
Suffield	9,000	1,050,000
Wallingford	40,000	1,050,000
Winchester	15,000	100,000
TOTAL	327,000	$5,920,000

+ Exceeds State unemployment rate of 5.6% which is below the National rate.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 25 needed facilities (treatment plants and interceptors) each have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $186 million of which the industrial portion would be $32 million or 17 percent. Of the 25 needed facilities, 5, or 20 percent, will serve a community with a population of less than 10,000.

STATE OF CONNECTICUT

III. Potential Effect (Data from Other Sources)

Various public and private sources have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
+East Windsor	9,000	?
Greenwich	60,000	?
North Haven	25,000	?
++Plainfield	3,000	?
Southington	16,000	?
Stamford	109,000	?
Vernon	30,000	?
+West Haven	53,000	?
TOTAL	305,000	?

+ Exceeds State unemployment rate of 5.6% which is below the National rate.

++ Exceeds National unemployment rate of 7.1%.

STATE OF DELAWARE

1. Short term Effect (From State Reported Data)

Wilmington, with a population of over 393,800 will be affected. The daily flow into the affected POTWs is 90 mgd of which 7 mgd, or 8 percent, is contributed by 13 affected industrial users. The estimated POTW construction cost is $100 of which the industrial portion is $6 million dollars, or 6 percent. The largest industrial groups affected are:

(1) Chemicals and Allied Products, 2 mgd, $2 million,
(2) Fabricated Metal Products, 1 mgd, $1 million,
(3) Transportation Equipment, .7 mgd, $.8 million.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 4 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $63 million of which the industrial portion would be $30 million, or 49 percent. Of these four needed facilities, 2, or 50 percent, will serve communities with populations of less than 10,000.

STATE OF FLORIDA

I. Short Term Effect (From State Reported Data)

A. Overview

Five communities, ranging in size from 59,500 to 528,900, with an average population of 232,000, will be affected. The population of all the communities affected is over 1,100,000. The daily flow into the affected POTWs is 270 mgd of which 12 mgd or 4 percent is contributed by 79 affected industrial users. The estimated POTW construction cost is $272 million of which the industrial portion is $12 million or 4 percent. The largest industrial groups affected are:

(1) Food and Kindred Products, 3 mgd, $3 million,
(2) Transportation by Air, 2 mgd, $2 million.

B. Communities with populations under 100,000

Orlando and Pensacola, with populations of 99,000 and 59,500 respectively, will be affected. The daily flow into the Orlando POTW is 48 mgd of which 2 mgd, or 4 percent, is contributed by 10 affected industrial users in Pensacola, the daily flow into the POTW is 20 mgd of which about .7 mgd, or 4 percent, is generated by 7 affected industrial users. The estimated POTW construction cost in Orlando is $50 million of which the industrial portion is $2 million, or 4 percent. Pensacola's POTW construction cost is estimated to be $20 million with an industrial portion of $.7 million, or 4 percent. The largest industrial groups affected are:

(1) Food and Kindred Products, 1 mgd, $1 million,
(2) Chemicals and Allied Products, .7 mgd, $.7 million.

C. Communities with populations between 100,000 and 1,000,000

Three communities, ranging in size from 140,000 to 528,000, will be affected. The daily flow into the affected POTWs is 202 mgd of which 9 mgd or 4 percent is contributed by 62 affected industrial users. The estimated POTW construction cost is $202 million of which the industrial portion is over $9 million, or 4 percent. The largest industrial groups affected are:

(1) Food and Kindred Products, 3 mgd, $3 million,
(2) Transportation by Air, 2 mgd, $2 million.

Community	Population	Industrial Portion
Fort Lauderdale	140,000	$ 50,000
Jacksonville	528,900	5,000,000
++Miami	334,900	3,600,000
TOTAL	1,003,800	$8,650,000

++ Exceeds National Unemployment rate of 7.1%.

STATE OF FLORIDA

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 19 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $300 million of which the industrial portion would be $79 million, or 28 percent. Of these 19 needed facilities, 2, or 10 percent, will serve communities with populations of less than 10,000.

II. Potential Effect (Data from Other Sources)

Various public and private sources have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
Orange Co.	200,000	$3,000,000
St. Petersburg	250,000	350,000
TOTAL	450,000	$3,350,000

STATE OF GEORGIA

I. Short Term Effect (From EPA Regional reported data)

Four communities, ranging in size from 7,500 to 43,000 with an average population of 25,000, will be affected. The combined population of the communities affected is over 100,000. The daily flow into the affected POTWs is 63 mgd of which 26 mgd, or 42 percent, is contributed by 74 affected industrial users. The estimated POTW construction cost is $70 million of which the industrial portion is $35 million. The largest industrial groups affected are:

(1) Textile Mill Products, 11 mgd, $12 million

Community	Population	Industrial Portion
++Calhoun	7,500	$ 690,000
++Dalton	26,000	28,770,000
La Grange	24,000	2,850,000
++Rome	43,200	2,160,000
TOTAL	109,700	$34,470,000

++ Exceeds National unemployment rate of 7.1%.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 31 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $286 million of which the industrial portion would be $46 million, or 16 percent. Of these 31 needed facilities, 14, or 45 percent, will serve communities with populations of less than 10,000.

III. Potential Effect

STATE OF GEORGIA (Data reported by State)

Potential Impact of Stafford Amendment

Grantee	Estimated Grant Amt. ($M)	% Flow From Industries > 50,000 GPD	Potential Impact on Gran ($ M Lost)
Atlanta (R. M. Clayton)	20.8	7	1.46
Atlanta (Utoy)	7.0	7	0.49
Brunswick	5.0	38	1.90
Calhoun	4.0	3[1]	1.12
Cedartown	6.3	12	0.76
Chickamauga	4.1	32	1.31
Conyers (Almond Br.)	1.3	6	0.08
Dalton	44.0	49	21.56[2]
Douglas	1.5	25	0.38
Ellijay	0.8	47	0.38
Jasper	1.6	7	0.11
LaFayette	2.8	19	0.53
LaGrange	7.3	62	4.53
Macon (Poplar St.)	20.0	34	6.80
Macon (Rocky Cr.)	32.0	43	13.76
Milledgeville	0.2	14	0.03
Monroe	5.5	6	0.33
Montezuma (#2)	0.2	91	0.18
Quitman	3.0	7	0.21
Rome	11.3	19[3]	2.15
Savannah	0.8	10	0.08[2]
Social Circle	0.3	22	0.07
Swainsboro	1.4	13	0.18
Sylvania	0.4	23	0.09
Thomaston	2.7	13	0.35
Thomasville	4.0	9	0.36
Waycross	6.0	11	0.66
Winder	1.0	6	0.06
		TOTAL	$59.92M

1. Total industrial flow is nearly 60% of design capacity, but mostly attributable to small industries. Only 5 of 42 exceed 50,000 GPD.

2. Some Step 3 work already awarded; may be exempt.

3. Impact may be greater, depending on final regulations defining "flow per day equivalent to 50,000 gallons per day of sanitary waste." Rome's industries contribute 40% of the daily flow and 60% of the organic loading, but only 19% of this flow is generated by industries discharging in excess of 50,000 gallons per day.

STATE OF HAWAII

I. Short Term Effect (From State Reported Data)

The community of Honolulu, with a population of 350,000, will be affected. The area POTW has a daily flow of 70 mgd of which 6 mgd, or 9 percent, is contributed by 12 affected industrial users. The estimated POTW construction cost is $74 million of which the industrial cost is $4 million, or 6 percent. The largest industrial group affected is Food & Kindred Products, 6 mgd, $4 million.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 2 needed facilities (treatment plants and interceptors) each have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be 74.6 million of which the industrial portion would be $10 million or 13 percent. Of the 2 needed facilities, 1 will serve a community with a population of less than less than 10,000.

STATE OF IDAHO

I. Short Term Effect (From State Reported Data)

The Boise metropolitan area, with a population of 100,000, and 4 smaller communities, ranging in size from 10,000 to 72,000, will be affected. The combined population of the communities affected is over 252,000. The Boise area POTW has a daily flow of 45 mgd of which .2 mgd, or .5 percent is contributed by 3 affected industrial users. The four smaller communities have a daily flow of 36 mgd with 8 impacted industrial users contributing 12 percent, or 4 mgd, of the total flow. The estimated POTW construction cost if $55 million of which the industrial portion is $1 million. The cost is Boise is $20 million, with an industrial portion of $.2 million; the 4 smaller communities have a POTW construction cost of $10 million of which the industrial portion is $.8 million. The largest industrial group affected is Food and Kindred Products, 4 mgd, $.8 million.

Community	Population	Industrial Portion
Blackfoot	10,000	$ 6,000
Boise	100,000	200,000
Idaho Falls	40,000	730,000
+Lewiston	30,000	300,000
+Pocatello	72,000	38,000
TOTAL	252,000	$1,274,000

+ Exceeds State unemployment rate of 6.1% which is below the National rate.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 10 needed facilities (treatment plants and interceptors) each have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $103 million of which the industrial portion would be $21 million or 20 percent. Of the 10 needed facilities, 3, or 30 percent, will serve communities with populations of less than 10,000.

STATE OF ILLINOIS

I. Short Term Effect (From State Reported Data)

Twenty-four communities, ranging in size from 1,400 to 89,000 with an average population of 17,500, will be affected. The combined population of the communities affected is over 422,000. The daily flow into the affected POTWs is 120 mgd of which 20 mgd, or 17 percent, is contributed by 59 affected industrial users. The estimated POTW construction cost is $275 million of which the industrial portion is $44 million. The largest industrial groups affected are:

(1) Food and Kindred Products, 8 mgd, $13 million,
(2) Fabricated Metal Products and Machinery, 5 mgd, $5 million,
(3) Transportation Equipment, 1.3 mgd, $1.9 million.

Community	Population	Industrial Portion	Community	Population	Industrial Portion
Arthur	2,300	$ 24,000	+++Joliet	74,000	$ 6,478,000
Belleville	44,000	138,000	++Kankakee	31,000	9,365,000
Belvidere	17,000	2,400,000	++Milan	5,100	158,000
Canton	14,000	47,000	Monticello	4,600	1,614,000
++ Centralia	13,000	50,000	+++Peotone	2,500	191,000
Chillicothe	6,000	87,000	Roselle	9,200	500,000
Clinton	7,600	804,000	St. Charles	16,000	2,125,000
++ Decatur	89,000	13,800,000	Spring Valley	5,400	162,000
++ Fairfield	5,800	527,000	Streator	15,000	704,000
Geneva	9,100	123,000	Taylorville	11,000	3,264,000
+++ Herrin	9,600	1,300,000	Waverly	1,400	9,500
Jacksonville	19,000	209,000	++Woodstock	11,000	80,000
			TOTAL	422,400	$44,159,000

++ Exceeds National unemployment rate of 7.1%.
+++ Exceeds State unemployment rate of 8.8% which exceeds the National rate.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 63 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $1.2 billion of which the industrial portion would be $250 million, or 20 percent. Of these 63 needed facilities, 39, or 62 percent, will serve communities with populations of less than 10,000.

STATE OF ILLINOIS

III. Potential Effect (Data From Other Sources)

Various public and private sources have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of industrial cost exclusion (ICE) on the community.

	Community	Population	Industrial Portion
+++	Chicago	4,300,000	$ 5,120,000
	Galena	?	?
+++	Rockford	196,000	27,700,000
	TOTAL	4,496,000	$32,820,000

+++ Exceeds State unemployment rate of 8.8% which exceeds the National rate.

STATE OF INDIANA

I. Short Term Effect (From State Reported Data)

A. Overview

Eighteen communities, ranging in size from 5,500 to 775,000 with an average population of 89,400, will be affected. The combined population of the communities affected is over 1,600,000. The daily flow into the affected POTWs is 338 mgd of which 97 mgd, or 29 percent, is contributed by 223 affected industrial users. The estimated POTW construction cost is $240 million of which the industrial portion is $51 million, or 20 percent. The largest industrial groups affected are:

(1) Transportation Equipment, 10 mgd, $10.7 million,
(2) Primary Metal Industries, 4 mgd, $7.4 million,
(3) Fabricated Metal Products, 5 mgd, $7 million,
(4) Food and Kindred Products, 6 mgd, $4 million,
(5) Electrical and Electronic Machinery, 4 mgd, $2 million.

B. Communities with Populations under 100,000

Fifteen communities ranging in size from 5,500 to 75,000 with an average population of 35,300 will be affected. The combined population of these communities is over 529,000. The daily flow into the affected POTWs is 110 mgd of which 24 mgd, or 22 percent, is contributed by 95 affected industrial users. The estimated POTW construction cost is $156 million of which the industrial portion is $34 million, or 23 percent. The largest industrial groups affected are:

(1) Primary Metal Industries, 4 mgd, $7 million,
(2) Transportation Equipment, 6 mgd, $7 million,
(3) Food and Kindred Products, 1 mgd, $2 million,
(4) Fabricated Metal Products, 5 mgd, $5 million,
(5) Electrical and Electronic Machinery, .9 mgd, $1 million.

Community	Population	Industrial Portion	Community	Population	Industrial Portion
+++Anderson	75,000	$ 6,500,000	Mooresville	6,000	$ 600,000
Bloomington	45,000	19,000	+++Muncie	72,000	7,790,000
Clarksville	15,000	1,000,000	++New Albany	40,000	650,000
+++Columbia	5,500	1,200,000	++Plymouth	8,000	110,000
+++East Chicago	50,000	10,630,000	++Terra Haute	72,000	730,000
+++Elkhart	45,000	2,210,000	++Vincannes	22,000	1,500,000
Jeffersonville	21,000	80,000	Warsaw	11,000	900,000
+++Michigan City	42,000	1,560,000			
			TOTAL	529,000	$35,479,000

++ Exceeds National unemployment rate of 7.1%.
+++ Exceeds State unemployment rate of 8.6%, which is above the National rate.

STATE OF INDIANA

C. Communities with populations between 100,000 and 1,000,000

Three communities, ranging in size from 120,000 to 775,000 with an average population of over 350,000, will be affected. The combined population of these communities is over 1,000,000. The daily flow into the affected POTWs is 228 mgd of which 73 mgd, or 32 percent, is contributed by 128 affected industrial users. The estimated POTW construction cost is $84 million of which the industrial portion is $16 million, or 18 percent. The largest industrial groups affected are:

(1) Transportation Equipment, 4.5 mgd, $3 million,
(2) Food and Kindred Products, 5 mgd, $1.3 million,
(3) Fabricated Metal Products, .8 mgd, $1 million,
(4) Electrical and Electronic Machinery, 3 mgd, $.9 million.

Community	Population	Industrial Portion
+++Fort Wayne	185,000	$ 8,300,000
+++Hammond (S.D.)	120,000	2,700,000
++Indianapolis	775,000	4,500,000
TOTAL	1,080,000	$15,500,000

++ Exceeds National unemployment rate of 7.1%.
+++ Exceeds State unemployment rate of 8.6% which is above National rate.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 39 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $295 million of which the industrial portion would be $64 million, or 22 percent. Of these 39 needed facilities, 20, or 51 percent, will serve communities with populations of less than 10,000.

STATE OF IOWA

I. Short Term Effect (From State Reported Data)

A. Overview

Ten communities, ranging in size from 8,700 to 220,000 with an average population of 47,900, will be affected. The population of all the communities affected is over 479,000. The daily flow into the affected POTWs is 190 mgd of which 15 mgd, or 8 percent, is contributed by 45 affected industrial users. The estimated POTW construction cost is $132 million of which the industrial portion is $11 million, or 9 percent. The largest industrial groups affected are:

(1) Food and Kindred Products, 8 mgd, $6 million,
(2) Machinery, except Electrical, 2 mgd, $2 million,
(3) Chemicals and Allied Products, 1 mgd, $1 million.

B. Communities with populations under 100,000

Nine communities, ranging in size from 8,700 to 73,000 with an average population of 28,800, will be affected. The population of all the communities affected is over 259,000. The daily flow into the affected POTWs is 90 mgd of which 10 mgd, or 11 percent, is contributed by 24 affected industrial users. The estimated POTW construction cost is $76 million of which the industrial portion is $8 million, or 10 percent. The largest industrial groups affected are:

(1) Food and Kindred Products, 5 mgd, $4 million,
(2) Machinery, except Electrical, 2 mgd, $2 million,
(3) Chemicals and Allied Products, 1 mgd, $1 million.

Community	Population	Industrial Portion	Community	Population	Industrial Portion
Boone	12,500	$ 72,000	Iowa City	47,700	$ 1,773,000
Cedar Falls	35,000	257,000	+Marshalltown	26,500	1,315,000
Charles City	9,100	523,000	Newton	15,600	1,638,000
Fairfield	8,700	38,000	+Waterloo	73,000	2,340,000
+Fort Dodge	31,200	200,000			
			TOTAL	259,300	$ 8,156,000

+ Exceeds State Unemployment rate of 5.3% which is below the National rate.

C. Communities with populations between 100,000 and 1,000,000

+Des Moines, with a population of 220,000, will be affected. The daily flow into the affected POTW is 100 mgd of which 5 mgd, or 5 percent, is contributed by 21 affected industrial users. The estimated POTW construction cost is $56 million of which the industrial portion is $3 million, or 5 percent. The largest industrial group affected is Food and Kindred Products, 2 mgd, $1 million.

STATE OF IOWA

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 34 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $226 million of which the industrial protion would be $47 million, or 21 percent. Of these 34 needed facilities, 20, or 60 percent, will serve communities with populations of less than 10,000.

STATE OF KANSAS

1. Short Term Effect (From State Reported Data)

A. Overview

Seven communities, ranging in size from 5,000 to over 300,000 with an average population of 86,187, will be affected. The combined population of the communities affected is over 600,000. The daily flow into the affected POTWs is 108 mgd of which 20 mgd, or 19 percent, is contributed by 50 affected industrial users. The estimated POTW construction cost is $120 million of which the industrial portion is $25 million, or 21 percent. The largest industrial groups affected are:

(1) Food & Kindred Products, 6 mgd, $7 million,
(2) Transportation Equipment, 2 mgd, $3 million.

B. Communities with populations under 100,000

Five communities, ranging in size from 5,000 to 40,000 with an average population of 20,600, will be affected. The combined population of these communities is over 103,000. The daily flow into the affected POTWs is 22 mgd of which 6 mgd, or 28 percent, is contributed by 13 affected industrial users. The estimated POTW construction cost is $28 million of which the industrial portion is $9 million, or 32 percent. The largest industrial groups affected are:

(1) Food & Kindred Products, 5 mgd, $7 million,
(2) Transportation Equipment, .5 mgd, $2 million.

Community	Population	Industrial Portion
Dodge City	23,000	$ 800,000
++Hutchinson	40,000	5,090,000
Liberal	15,000	1,640,000
+Olathe	20,000	1,000,000
++South Hutchinson	5,000	400,000
TOTAL	103,000	$8,930,000

+ Exceeds State unemployment rate of 4.4 which is below the National rate.
++ Exceeds National unemployment rate of 7.1%.

C. Communities with populations between 100,000 and 1,000,000

Two communities, with populations of 200,000 and 300,000, will be affected. The daily flow into the affected POTWs is 85 mgd of which 14 mgd, or 17 percent, is contributed by 37 affected industrial users. The estimated POTW construction cost is $43 million of which the industrial portion is over $16 million, or 39 percent. The largest industrial groups affected are:

STATE OF KANSAS

(1) Transportation Equipment, 2 mgd, $2 million,
(2) Stone, Clay & Glass Products, 2 mgd, $1 million,
(3) Chemicals and Allied Products, 1 mgd, $1 million.

Community	Population	Industrial Portion
+Kansas City	200,000	$10,000,000
Wichita	300,000	6,481,000
TOTAL	500,000	$16,481,000

+ Exceeds State unemployment rate of 4.4 which is below the National rate.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 22 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $142 million of which the industrial portion would be $39 million or 28 percent. Of these 22 needed facilities, 7, or 32 percent, will serve communities with populations of less than 10,000.

STATE OF KENTUCKY

I. Short Term Effect (From State Reported Data)

Three communities, ranging in size from 11,700 to 90,000 with an average population of 51,000, will be affected. The combined population of the communities affected is over 153,000. The daily flow into the affected POTWs is 22 mgd of which 2 mgd, or 10 percent, is contributed by 10 affected industrial users. The estimated POTW construction cost is $12 million of which the industrial portion is $1 million or 9 percent. The largest industrial groups affected are:

(1) Electrical and Electronics Machinery, 1 mgd, $.2 million,
(2) Food and Kindred Products, .3 mgd, $.2 million.

Community	Population	Industrial Portion
Lexington	90,000	$ 300,000
++Middleboro	11,700	600,000
++Owensboro	51,400	100,000
TOTAL	153,100	$1,000,000

++ Exceeds National unemployment rate of 7.1%.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 28 needed facilities (treatment plants and interceptors) each have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $136 million of which the industrial portion would be $20 million or 15 percent. Of the 28 needed facilities, 20, or 71 percent, will serve communities with populations of less than 10,000.

III. Potential Effect (Data from Other Sources)

Various public and private sources have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
Lowrenburg	5,000	? (Food and Kindred Products)

STATE OF LOUISIANA

I. Short Term Effect (From State Reported Data)

Pineville, with a population of 18,300, and Shreveport, with a population of 133,000, have daily flows of 3 mgd and 32 mgd, respectively. In Pineville, the industrial flow is .2 mgd, or 7 percent, of the total flow; in Shreveport, however, industrial flows account for 2 mgd or 6 percent of the total flow. The estimated POTW construction cost in Pineville is $6 million of which the industrial portion is $.4 million, or 22 percent. In Shreveport, POTW construction cost is estimated to be $48 million of which the industrial portion is about $2 million, or about 5 percent. The largest industrial groups affected are:

(1) Chemicals and Allied Products, .2 mgd, $.4 million,
(2) Primary Metal Industries, .2 mgd, $.3 million.

Community	Population	Industrial Portion
++Pineville	18,000	$ 440,000
+Shreveport	133,000	2,250,000
TOTAL	151,000	$2,690,000

+ Exceeds State unemployment rate of 6.1% which is below the National rate.
++ Exceeds National unemployment rate of 7.1%.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 9 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $32 million of which the industrial portion would be $.9 million or 3 percent. Of these 9 needed facilities, 5, or 56 percent, will serve communities with populations of less than 10,000.

III. Potential Effect (Data from Other Sources)

Various public and private sources have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
Metarrie	170,000	?

STATE OF MAINE

I. Short Term Effect (From State Reported Data)

Four communities, ranging in size from 2,000 to 20,000 with an average population of 6,700, will be affected. The combined population of the communities affected is over 26,700. The daily flow into the affected POTWs is 9 mgd of which 3 mgd, or 33 percent, is contributed by 5 affected industrial users. The estimated POTW construction cost is $14 million of which the industrial portion is about $4 million. The largest industrial groups affected are:

(1) Leather and Leather Products, 1 mgd, $2 million,
(2) Textile Mill Products, 1 mgd, $2 million.

Community	Population	Industrial Portion
Biddeford	20,000	$ 670,000
Corinna S.D.	2,000	1,100,000
North Berwick	2,000	70,000
++South Paris	2,700	2,080,000
TOTAL	26,700	$3,920,000

++ Exceeds National unemployment rate of 7.1%.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 8 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $33 million of which the industrial portion would be $16 million, or 48 percent. Of these 8 needed facilities, 7, or 88 percent, will serve communities with populations of less than 10,000.

III. Potential Effect (Data from Other Sources)

Various public and/or private sources have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
New Port	2,000	(Dairy Industry)

STATE OF MARYLAND

I. Short Term Effect (From State Reported Data)

The Baltimore metropolitan area, with a population over 900,000, and one other community, with a population of 30,000, will be affected. The Baltimore area POTW has a daily flow of 280 mgd of which 16 mgd, or 6 percent is contributed by 57 affected industrial users. Frederick City, the smaller community POTW, has a daily flow of 7 mgd of which .4 mgd, or 5 percent, is contributed by three affected industrial users. The estimated POTW cost in Baltimore is $280 million, with an industrial portion of $16 million, or 6 percent. The POTW in Frederick has an estimated cost of $13 million of which the industrial portion is $.6 million, or 5 percent.

The largest industrial groups affected are:

A. In Baltimore,

(1) Food and Kindred Products, 2 mgd, $2 million,
(2) Paper and Allied Product, 1 mgd, $1 million,
(3) Automotive Equipment, 1 mgd, $1 million.

B. In Frederick,

(1) Food and Kindred Products, .2 mgd, $.4 million,
(2) Electrical and Electronic Machinery, .1 mgd, $.2 million.

Both Baltimore and Frederick have unemployment rates which exceed the National unemployment rate of 7.1 percent.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 16 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $176 million of which the industrial portion would be $25 million, or 15 percent. Of these 16 needed facilities, 10, or 60 percent, will serve communities with populations of less than 10,000.

STATE OF MASSACHUSETTS

I. Short Term Effect (From Unconfirmed Sources)

A. Overview

Ten communities, ranging in size from 9,000 to over 3,000,000 with an average population of 369,900, will be affected. The combined population of the communities affected is over 3,699,000. The daily flow into the affected POTWs is 583 mgd of which 153 mgd, or 26 percent, is contributed by over 14 affected industrial users. The estimated POTW construction cost is $253 million of which the industrial portion is $95 million, or 38 percent. The largest industrial groups affected are Textile Mill Products and Plating Manufacturers.

B. Communities with populations under 100,000

Seven communities, ranging in size from 9,000 to 80,000 with an average population of 34,100, will be affected. The combined population of these communities is over 239,000. The daily flow into the affected POTWs is 38 mgd of which 19 mgd, or 50 percent, is contributed by over 10 affected industrial users. The estimated POTW construction cost is $60 million of which the industrial portion is $30 million, or 50 percent. The largest industrial groups affected are Textile Mill Products, Plating Manufacturers, and the Dairy Industry.

Community	Population	Industrial Portion
Billerica	32,000	$ 5,300,000
Dudley	9,000	130,000
++Gardner	20,000	1,400,000
++South Bridge	18,000	150,000
+South Essex SD	80,000	11,100,000
++Taunton	60,000	1,350,000
+Webster	20,000	10,600,000
TOTAL	239,000	$30,030,000

+ Exceeds State unemployment rate of 5.6% which is below the National rate.
++ Exceeds National unemployment rate of 7.1%

C. Communities with populations between 100,000 and 1,000,000

Two communities, with populations of 160,000 to 300,000, will be affected. The area POTWs have a daily flow of 71 mgd with at least 4 impacted industrial users contributing 46 percent, or 33 mgd, of the total flow. The POTW construction cost is $85 million of which the industrial portion is $42 million. The largest industrial groups affected are Textile Mill Products and Plater Manufacturers.

STATE OF MASSACHUSETTS

Community	Population	Industrial Portion
++New Bedford	160,000	38,000,000
+Worcester	300,000	4,000,000
TOTAL	460,000	$42,000,000

+ Exceeds State unemployment rate of 5.6% which is below the National rate.
++ Exceeds National unemployment rate of 7.1%.

C. Communities with populations over 1,000,000

The Boston metropolitan area, with a population of 3,000,000, will be affected. The Boston area POTWs have a daily flow of 474 mgd of which 101 mgd, or 21 percent, is contributed by industrial users. The estimated POTW construction cost is $108 million of which the industrial portion is $23 million, or 21 percent. Data on the industrial groups affected is not available.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 24 needed facilities (treatment plants and interceptors) each have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $714 million of which the industrial portion would be $160 million, or 22 percent. Of the 24 needed facilities, 10 will serve communities with populations of less than 10,000.

III. Potential Effect (Data from Other Sources)

Various public and/or private sources have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
Beverly	40,000	?
Danvers	30,000	?
Framingham	65,000	?
Lawrence	70,000	?
Westfield	35,000	?
TOTAL	240,000	?

STATE OF MICHIGAN

I. Short Term Effect (From State Reported Data)

A. Overview

Thirty communities, ranging in size from 1,000 to over 657,000 with an average population of 44,000, will be affected. The combined population of the communities affected is over 1,300,000. The daily flow into the affected POTWs is 232 mgd of which 74 mgd, or 32 percent, is contributed by 115 affected industrial users. The estimated POTW construction cost is $445 million of which the industrial portion is $52 million, or 11 percent. The largest industrial groups affected are:

(1) Transportation Equipment, 12 mgd, $15 million,
(2) Electrical and Electronic Machinery, 8 mgd, $13 million,
(3) Machinery, except Electrical, 2 mgd, $2 million,
(4) Primary Metal Industries, 2 mgd, $1.4 million,
(5) Paper and Allied Products, 16 mgd, $2 million.

B. Communities with populations under 100,000

Twenty-seven communities, ranging in size from 1,000 to 91,000 with an average population of 15,900, will be affected. The combined population of the communities is over 430,000. The daily flow into affected POTWs is 146 mgd of which 32 mgd, or 22 percent, is contributed by 71 affected industrial users. The estimated POTW construction cost is $345 million of which the industrial portion is $30 million, or 9 percent. The largest industrial groups affected are:

(1) Electrical and Electronic Machinery, 8 mgd, $13 million,
(2) Transportation Equipment, 6 mgd, $1 million,
(3) Machinery, except Electrical, 2 mgd, $2 million,
(4) Primary Metal Industries, 1 mgd, $1.3 million.

Community	Population	Industrial Portion	Community	Population	Industrial Portion
++ Benton Harbor	72,000	$ 27,000	+++Port Huron	35,800	$12,127,000
++ Calumet	1,000	1,480,000	+++Reed City	2,300	85,000
++ Cedar Spring	2,900	1,125,000	Rochester	7,100	159,000
++ Constantine	1,700	72,000	++South Haven	6,500	8,000
++ Flushing	7,100	276,000	++Sturgis-St. Joseph Co.	9,300	530,000
++ Hudson	2,600	798,000	+++Saginaw	92,000	1,103,000
++ Marine City	4,600	1,622,000	+++Saginaw-Frankenmuth	2,800	481,000
Midland	34,900	158,000	++Saline	4,800	64,000
++ Memphis	1,100	450,000	+++Sault St. Marie	15,000	908,000
++ Monroe	23,900	209,000	++Sparta	3,100	3,749,000
++ Mount Clemens	20,500	678,000	+++Tucumseh	7,100	1,800,000
++ Muskegon Co.-Whitehall	5,400	900,000	+++Vasser	2,800	269,000
++ Otsego	4,500	133,000	++Wyoming	57,000	480,000
++ Paw-Paw	3,200	161,000			
			TOTAL	431,000	$29,852,000

++ Exceeds National Unemployment rate of 7.1%.
+++ Exceeds State employment rate of 12.1% which exceeds the National rate.

STATE OF MICHIGAN

C. Communities with populations between 100,000 and 1,000,000

Three communities ranging in size from 114,000 to 657,000 will be affected. The daily flow into the affected POTWs is 86 mgd of which 41 mgd, or 4 percent, is contributed by 44 affected industrial users. The estimated POTW construction cost is $100 million of which the industrial portion is over $22 million, or 22 percent. The largest industrial groups affected are:

(1) Paper and Allied Products, 16 mgd, $2 million,
(2) Transportation Equipment, 6 mgd, $14 million,
(3) Primary Metal Industries, 1 mgd, $.1 million.

Community	Population	Industrial Portion
+++Muskegon County	114,000	$ 4,200,000
++Lansing	132,000	15,000,000
+++Genesee County	657,000	3,000,000
TOTAL	903,000	$22,200,000

++ Exceeds National Unemployment rate of 7.1%.
+++ Exceeds State Unemployment rate of 12.1% which exceeds the National rate.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 40 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $1,087 billion of which the industrial portion would be $275 million, or 25 percent. Of these 40 needed facilities, 27, or 68 percent, will serve communities with populations of less than 10,000.

III. Potential Effect (Data from Other Sources)

Various public and private sources have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
+++Detroit	?	$11,500,000
Rochester	?	?
++South Essex	?	8,500,000
+++Wayne County	?	5,000,000
TOTAL		$25,000,000

++ Exceeds National Unemployment rate of 7.1%.
+++ Exceeds State Unemployment rate of 12.1% which exceeds the National rate.

STATE OF MICHIGAN

C. Communities with populations between 100,000 and 1,000,000

Three communities ranging in size from 114,000 to 657,000 will be affected. The daily flow into the affected POTWs is 86 mgd of which 41 mgd, or 4 percent, is contributed by 44 affected industrial users. The estimated POTW construction cost is $100 million of which the industrial portion is over $22 million, or 22 percent. The largest industrial groups affected are:

(1) Paper and Allied Products, 16 mgd, $2 million,
(2) Transportation Equipment, 6 mgd, $14 million,
(3) Primary Metal Industries, 1 mgd, $.1 million.

Community	Population	Industrial Portion
+++Muskegon County	114,000	$ 4,200,000
++Lansing	132,000	15,000,000
+++Genesee County	657,000	3,000,000
TOTAL	903,000	$22,200,000

++ Exceeds National Unemployment rate of 7.1%.
+++ Exceeds State Unemployment rate of 12.1% which exceeds the National rate.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 40 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $1,087 billion of which the industrial portion would be $275 million, or 25 percent. Of these 40 needed facilities, 27, or 68 percent, will serve communities with populations of less than 10,000.

III. Potential Effect (Data from Other Sources)

Various public and private sources have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
+++Detroit	1,500,000	$11,500,000
Rochester	7,000	?
++South Essex	?	8,500,000
+++Wayne County	1,000,000	5,000,000
TOTAL	2,507,000	$25,000,000

++ Exceeds National Unemployment rate of 7.1%.
+++ Exceeds State Unemployment rate of 12.1% which exceeds the National rate.

STATE OF MINNESOTA

I. Short Term Effect (From State Reported Data)

A. Overview

Fifteen communities, ranging in size from 800 to over 1,850,000 with an average population of 135,000, will be affected. The combined population of the communities affected is over 2,000,000. The daily flow into the affected POTWs is 252 mgd of which 63 mgd, or 25 percent, is contributed by 36 affected industrial users. The estimated POTW construction cost is $238 million of which the industrial portion is $36 million, or 15 percent. The largest industrial groups affected are:

(1) Food and Kindred Products, 7 mgd, $14 million,
(2) Chemicals and Allied Products, 3 mgd, $2.3 million,
(3) Fabricated Metal Products, 3 mgd, $2 million.

B. Communities with populations under 100,000

Thirteen communities, ranging in size from 800 to 15,300 with an average population of 3,500, will be affected. The combined population of these communities is over 45,500. The daily flow into the affected POTWs is 15 mgd of which 5 mgd, or 33 percent, is contributed by 20 affected industrial users. The estimated POTW construction cost is $34 million of which the industrial portion is $11 million, or 32 percent. The largest industrial group affected is Food and Kindred Products, 3 mgd, $10 million.

Community	Population	Industrial Portion	Community	Population	Industrial Portion
++ Aitkin	1,800	$2,500,000	+Perham	2,000	$ 850,000
++ Albany	1,600	247,000	Sleepy Eye	3,400	100,000
Blooming Prairie	1,800	300,000	Spring Valley	2,600	350,000
++ Frazee	1,000	800,000	Waseca	6,800	110,000
+ Le Sueur	3,800	500,000	Well	2,800	250,000
Owatonna	15,300	700,000	Worthington	800	2,400,000
+ Pelican Rapids	1,800	2,000,000			
			TOTAL	45,500	$11,107,000

+ Exceeds State unemployment rate of 5.4% which is below the National rate.
++ Exceeds National unemployment rate of 7.1%.

C. Communities with populations between 100,000 and 1,000,000

The only community within the population range affected is the City of Duluth. The population of Duluth is over 110,000. The daily flow into the affected POTWs is 36 mgd of which 16 mgd, or 44 percent, is contributed by 8 affected industrial users. The estimated POTW construction cost is $4 million of which the industrial portion is $2 million, or 50%. The largest industrial group affected is Paper and Allied Products, 13 mgd, $2 million. The unemployment rate in Duluth exceeds the National unemployment rate of 7.1%.

STATE OF MINNESOTA

D. Communities with populations over 1,000,000

Minneapolis-St. Paul, with a population of over 1,800,100, will be affected. The daily flow into the affected POTWs is over 200 mgd of which the industrial flow is 41 mgd, or 20 percent, of the total flow. The estimated POTW construction cost is $200 million of which the industrial portion is $23 million, or 12 percent. The largest industrial groups affected are:

(1) Chemicals and Allied Products, 4 mgd, $2.3 million,
(2) Food and Kindred Products, 4 mgd, $2.3 million,
(3) Paper and Allied Products, 3 mgd, $2 million,
(4) Fabricated Metal Products, 3 mgd, $2 million.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 46 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $91 million of which the industrial portion would be $25 million. Of these 46 needed facilities, 37, or 80 percent, will serve communities with populations of less than 10,000.

STATE OF MISSISSIPPI

I. Short Term Effect (From State Reported Data)

The Jackson metropolitan area, with a population of 170,000, and nine smaller communities, ranging in size from 3,000 to 89,300, will be affected. The combined population of the communities affected is over 390,000. The Jackson area POTW has a daily flow of 70 mgd of which 3 mgd, or 5 percent, is contributed by 25 affected industrial users. The nine smaller communities have a daily flow of 71 mgd with 29 impacted industrial users contributing 10 percent, or 7 mgd, of the total flow. The combined estimated POTW construction cost is $244 million of which the industrial portion is $13 million. The cost in Jackson is $71 million, with an industrial portion of $3 million, the nine smaller communities have a POTW construction cost of $176 million of which the industrial portion is $10 million. The largest industrial groups affected are:

A. In Jackson,

(1) Food and Kindred Products, .5 mgd, $.5 million

B. In the nine remaining communities,

(1) Food and Kindred Products, 3 mgd, $5 million,
(2) Rubber and Miscellaneous Plastic, 1 mgd, $2 million.

Community	Population	Industrial Portion
Biloxi	89,300	$ 3,155,000
Clarksdale	21,700	400,000
++Corinth	11,600	2,200,000
Hattiesburg	38,300	1,000,000
Jackson	170,000	3,000,000
Laurel	24,100	1,467,000
+McComb	12,000	500,000
Morton	3,000	600,000
++Ocean Springs	10,000	315,000
Pearl	10,000	70,000
TOTAL	390,000	$12,707,000

+ Exceeds State Unemployment Rate of 6.8% which is below the National rate.
++ Exceeds National Unemployment rate of 7.1%.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 24 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $246 million of which the industrial portion would be $35 million or 14 percent. Of the 24 needed facilities, 15, or 63 percent, will serve communities with populations of less than 10,000.

STATE OF MISSOURI

I. Short Term Effect

No information was received regarding the short term effect of the industrial cost exclusion (ICE). The Environmental Protection Agency's estimate of the industrial portion is $22 million.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 56 needed facilities (treatment plants and interceptors) each have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $582 million of which the industrial portion would be $163 million or 28 percent. Of the 56 needed facilities, 40, or 71 percent, will serve communities with populations of less than 10,000.

STATE OF MONTANA

I. Short Term Effect (From State Reported Data)

The community of Hamilton, with a population of 3,000, will be affected. The daily flow into the affected POTW is 2.5 mgd of which .1 mgd, or 4 percent, is contributed by 1 affected industrial user. The estimated POTW construction cost is $2.3 million of which the industrial portion is $.1 million. The largest industrial group affected is Food and Kindred Products, .1 mgd, $.1 million. Hamilton exceeds the National unemployment rate of 7.1 percent.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 4 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $14 million of which the industrial portion would be $.6 million, or 4 percent. Of these 4 needed facilities, 2, or 50 percent, will serve communities with populations of less than 10,000.

STATE OF NEBRASKA

I. Short Term Effect

No information was received regarding the short term effect of the industrial cost exclusion. The Environmental Protection Agency's estimate of the industrial portion is $5 million.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 13 needed facilities (treatment plants and interceptors) each have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $155 million of which the industrial portion would be $48 million or 31 percent. Of the 13 needed facilities, 7, or 54 percent, will serve communities with populations of less than 10,000.

STATE OF NEVADA

I. Short Term Effect (From State Reported Data)

Three communities, ranging in size from 32,000 to 196,000 with an average population of 119,000, will be affected. The combined population of these communities is over 358,000. The daily flow into the affected POTWs is 52 mgd of which .6 mgd, or 2 percent, is contributed by 9 affected industrial users. The estimated POTW construction cost is $34 million of which the industrial share is $.6 million. The largest industrial group affected is Personal Services, .7 mgd $.5 million:

Community	Population	Industrial Portion
++ Carson City	32,000	$250,000
++ Las Vegas	196,000	183,000
Reno/Sparks	130,000	140,000
TOTAL	358,000	$573,000

++ Exceeds National unemployment rate of 7.1%.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that one needed facility (treatment plant or interceptor) has a substantial industrial flow. That is it has an industrial flow over 100,000 gallons per day and more than 16 percent of the POTW flow. The construction cost is estimated to be $25 million of which the industrial portion would be $1 million, or 4 percent.

STATE OF NEW HAMPSHIRE

I. Short Term Effect (From State Reported Data)

Two communities, Lincoln and Manchester, will be affected. The combined population of the communities affected is over 85,000. The daily flow into the affected POTWs is 18 mgd of which 7 mgd, or 39 percent, is contributed by at least 2 affected industrial users. The estimated POTW construction cost is $22 million of which the industrial portion is $9 million. The largest industrial groups affected are Paper and Allied Products, and Textile Mill Products.

Community	Population	Industrial Portion
+Lincoln	1,300	$1,240,000
+Manchester	84,600	7,861,000
TOTAL	85,900	$9,101,000

+ Exceeds State unemployment rate of 4.5% which is below the National rate.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 17 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $137 million of which the industrial portion would be $48 million, or 35 percent. Of these 17 needed facilities, 13, or 77 percent, will serve communities with populations of less than 10,000.

III. Potential Effect (Data from Other Sources)

Various public and private sources have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
+Lebanon	10,000	?

+ Exceeds State Unemployment rate of 4.5% which is below the National rate.

STATE OF NEW JERSEY

I. Short Term Effect (From State Reported Data)

A. Overview

Twenty-seven communities, ranging in size from 9,000 to over 605,000 with an average population of 125,000, will be affected. The population of all the communities affected is over 3,382,000. The daily flow into the affected POTWs is 819 mgd of which 140 mgd, or 17 percent, is contributed by over 320 affected industrial users. The estimated POTW construction cost is $1.164 billion of which the industrial portion is $183 million, or about 16 percent. The largest industrial groups affected are:

(1) Fabricated Metal Products, 11 mgd, $48 million,
(2) Chemicals and Allied Products, 27 mgd, $37 million,
(3) Food and Kindred Products, 8 mgd, $14 million,
(4) Paper and Allied Products, 18 mgd, $12 million,
(5) Electrical and Electronic Machinery, 3 mgd, $13 million.

B. Communities with populations under 100,000

Fourteen area communities, ranging in size from 9,000 to 84,000 with an average population of 41,100, will be affected. The population of all the communities affected is over 575,000. The daily flow into the affected POTWs is 100 mgd of which 5 mgd, or 5 percent, is contributed by 27 affected industrial users. The estimated POTW construction cost is $215 million of which the industrial portion is $14 million, or 6 percent. The largest industrial groups affected are:

(1) Chemicals and Allied Products, 2 mgd, $4 million,
(2) Food and Kindred Products, 1 mgd, $6 million,
(3) Electrical and Electronic Machinery, 1 mgd, $1 million.

Community	Population	Industrial Portion	Community	Population	Industrial Portion
++Bayshore Reg S.A.	65,000	$1,130,000	Mapleshade/ Moorestown	36,000	$ 744,000
Cinnaminson, Plymyra, Riverton	26,000	1,014,000	North Burlington R.S.A.	84,000	1,050,000
East Windsor	40,000	331,000	Raritan Twp, MVA	9,000	566,000
Ewing-Lawrence	55,000	222,000	Rockaway Valley, RSA	59,000	471,000
++Landis S.A.	47,000	2,567,000	TWPSH of Morris Butterfield Plant	10,000	1,553,000
++Linden-Rosell S.A.	25,000	580,000	TWPSH of Morris Woodland Plant	20,000	836,000
Lopatcong (Phillipsburg)	39,000	198,000			
Manasquan S.A.	60,000	2,567,000			
			TOTAL	575,000	$13,829,000

++ Exceeds National unemployment rate of 7.1%.

STATE OF NEW JERSEY

C. Communities with populations between 100,000 and 1,000,000

Nine communities, ranging in size from 100,000 to 605,000, will be affected. The daily flow into the affected POTWs is 719 mgd of which 135 mgd, or 19 percent, is contributed by over 293 affected industrial users. The estimated POTW construction cost is $948 million of which the industrial portion is over $169 million or 18 percent. The largest industrial groups affected are:

(1) Fabricated Metal Products, 11 mgd, $48 million,
(2) Paper and Allied Products, 18 mgd, $12 million,
(3) Food and Kindred Products, 7 mgd, $11 million,
(4) Chemicals and Allied Products, 27 mgd, $33 million,
(5) Electrical and Electronic Machinery, 3 mgd, $11 million.

Community	Population	Industrial Portion
Camden County MUA	485,000	$73,288,000
++Elizabeth Joint Meeting	500,000	3,040,000
Gloucester Co. Util Authority	277,000	1,146,000
++Hudson Co. Util Authority	605,000	13,068,000
Middlesex Co. Util Authority	100,000	46,926,000
++Passaic Valley Sewerage Com	250,000	18,132,000
+Rahway Valley Sewerage Authority	200,000	8,898,000
Somerset-Raritan Valley Sewerage Auth	126,000	1,021,000
Trenton Sludge Facility	264,000	4,305,000
TOTAL	2,807,000	$169,824,000

+ Exceeds State unemployment rate of 6.8% which is below the National rate.
++ Exceeds National unemployment rate of 7.1%.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 41 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $1.457 billion of which the industrial portion would be $382 million, or 26 percent. Of these 41 needed facilities, 23, or 56 percent, will serve communities with populations of less than 10,000.

STATE OF NEW MEXICO

I. Short Term Effect (From State Reported Data)

Las Cruces, with a population of 95,000, and Roswell, with a population of 120,000, will be affected. The two area POTWs have a daily flow of 18 mgd of which 1 mgd, or 5 percent, is contributed by 4 affected industrial users. The estimated POTW construction cost is $17 million of which the industrial portion is $1 milliom. The cost in Las Cruces is $8 million, with an industrial portion of $.2 million; the Roswell POTW has a construction cost of $9 million of which the industrial portion is $.8 million. The largest industrial group affected is Food and Kindred Products, .8 mgd, $.7 million.

Community	Population	Industrial Portion
+++Las Cruces	95,000	$ 234,000
Roswell	120,000	869,000
TOTAL	215,000	$1,103,000

+++ Exceeds State unemployment rate of 7.7% which exceeds the National rate.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 6 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $40 million of which the industrial portion would be $4 million or 10 percent. Of the 6 needed facilities, 3, or 50 percent, will serve communities with populations of less than 10,000.

NOTE: According to recent information received by EPA, the following changes should be made in the above data:

	Item	Change From	To
1)	Paragraph I	two area POTWs .. flow of 18 mgd	10 mgd
2)	Las Cruces	Population/95,000	55,500
3)	Roswell	Population/120,000	45,000
4)		TOTAL/215,000	TOTAL/105,000

The above changes have not been incorporated into the National Summary.

STATE OF NEW YORK

I. Short Term Effect (From State Reported Data)

A. Overview

Twenty-nine communities, ranging in size from 1,000 to over 300,000 with an average population of 43,000, will be affected. The combined population of the communities affected is over 1,246,000. The daily flow into the affected POTWs is 321 mgd of which 43 mgd, or 13 percent, is contributed by 131 affected industrial users. The estimated POTW construction cost is $390 million of which the industrial portion is $76 million, or 19 percent. The largest industrial groups affected are:

(1) Food and Kindred Products, 11 mgd, $18 million,
(2) Machinery, except Electrical, 2 mgd, $7.1 million,
(3) Electrical and Electronic Machinery, 2 mgd, $10 million.

B. Communities with populations under 100,000

Twenty-five communities, ranging in size from 1,000 to 51,000 with an average population of 12,400, will be affected. The combined population of the communities affected is over 310,000. The daily flow into the affected POTWs is 122 mgd of which 32 mgd, or 26 percent, is contributed by 75 affected industrial users. The estimated POTW cnstruction cost is $268 million of which the industrial portion is $60 million, or 22 percent. The largest industrial groups affected are:

(1) Food and Kindred Products, 10 mgd, $17 million,
(2) Electrical and Electronic Machinery, 2 mgd, $9 million.

Community	Population	Industrial Portion	Community	Population	Industrial Portion
+++Auburn	46,000	$ 324,000	+++Heuvelton	1,000	$ 220,000
Avon	3,000	640,000	Ithica	27,000	5,970,000
+++Batavia	18,000	710,000	+++Kingston	26,000	800,000
+++Blasdell	4,000	470,000	+++Lake George	1,000	4,100,000
+++Canastota	5,000	5,040,000	+++Norwich	9,000	286,000
+++Champlain-Rouses Pt	4,000	780,000	+++Oswego	21,000	470,000
+++Cuba	2,000	4,260,000	Orangeburg	3,500	450,000
Dundee	2,000	666,000	Port Jefferson	8,000	330,000
Endicott	17,000	1,090,000	Seneca Falls	8,000	2,464,000
+++Fort Edwards	4,000	1,210,000	+++Silver Creek	3,500	1,600,000
+++Fulton	15,000	6,140,000	White Plain	51,000	15,000
+++Gloversville-Johnstown	27,000	20,575,000	+++Wilson	1,500	800,000
+++Granville	3,000	75,000			
			TOTAL	310,500	$59,525,000

+++ Exceeds State unemployment rate of 7.3% which exceeds the National rate.

C. Communities with populations between 100,000 and 1,000,000

Four communities, ranging in size from 200,000 to 300,000, will be affected. The daily flow into the affected POTWs is 198 mgd of which 10 mgd, or 5 percent, is contributed by 56 affected industrial users. The estimated POTW construction cost is $122 million of which the industrial portion is over $16 million or 13 percent. The largest industrial groups affected are:

(1) Food and Kindred Products, 1 mgd, $.4 million,
(2) Fabricated Metal Products, .6 mgd, $2 million,
(3) Machinery, except Electrical, 1 mgd, $4 million.

Community	Population	Industrial Portion
+++Orange County	230,000	$ 856,000
++Rochester	300,000	12,700,000
+++Syracuse	200,000	1,650,000
Yonkers	205,000	562,000
TOTAL	935,000	$15,768,000

++ Exceeds National unemployment rate of 7.1%.
+++ Exceeds State unemployment rate of 7.3% which exceeds the National rate.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 45 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $391 million of which the industrial portion would be $67 million or 17 percent. Of these 45 needed facilities, 25, or 56 percent, will serve communities with populations of less than 10,000.

New York State Department of Environmental Conservation

Analysis - ICE

The New York State Department of Environmental Conservation performed an indepth analysis of our Construction Grants Program for the purpose of assessing the potential effects of Section 3 of P.L. 96-483, Industrial Cost Exclusion (ICE). Based on the results of this evaluation, NYSDEC firmly believes that it would be to the best interest of the program and the tax paying population if ICE were repealed. Not only will such a significant change in funding criteria delay ongoing projects needed for water pollution control (40% - 50% of Step 3 & Step 2/3 projects we anticipate funding in FY-82 & 83) but this delay will also require expenditure of more public funds than if we were to proceed using existing funding criteria.

The Law is unclear in several key areas needed to establish baselines for our analysis. Formost is the definition of an industrial user. For the purposes of this study, we used the 40 CFR Part 35, Subpart E definition of "Industrial user", which was promulgated pursuant to P.L. 95-217. The industrial user definition used is:

> "Industrial user". Any non-governmental, non-residential user of a publicly owned treatment works which discharges more than the equivalent of 50,000 gallons per day (gpd) of sanitary wastes and which is identified in the Standard Industrial Classification Manual, 1972, Office of Management and Budget, as amended and supplemented under one of the following divisions:
>
> Division A. Agriculture, Forestry, and Fishing.
>
> Division B. Mining.
>
> Division D. Manufacturing.
>
> Division E. Transportation, Communications, Electric, Gas and Sanitary Services.
>
> Division I. Services.

The extent of the ICE exemption for projects which received a Step 2 grant prior to May 15, 1980 is not clear. For example, does this exemption apply only to the project phase which received a Step 2 grant or to an entire project if any phase received a Step 2 grant prior to May 15, 1980? In our study, we assumed the exemption would only apply to the project phase which received a Step 2 grant prior to May 15, 1980. We recently received a copy of EPA's proposed regulation for implementing ICE. EPA's proposal is to exempt the entire project if any phase received a Step 2 grant prior to May 15, 1980. We evaluated the minor differences in interpretation of the May 15, 1980 exemption and found it to have little or no effect on this study.

Several grantees have contacted us expressing industry's reluctance to enter into agreements concerning their wastewater facilities projects. The reluctance is due to their inability to determine the specific effects of ICE. Items which must be resolved are:

1. Will the first 50,000 gpd of flow be fundable for industries with a total flow exceeding 50,000 gpd?

2. Will funding be excluded for the total project based on percent of industrial capacity, or only to specific units or portion of units utilized for treatment of industrial flow?

3. How will the currently allowable design capacity for future industry be affected by the funding restrictions?

The first task in our study was to develop a list of all affected projects using our Municipal Sewage Treatment Works Project Priority List as a starting point. The majority of potentially affected projects in FY-84 & 85 are in their infancy, and specific information regarding the extent of industrial participation is not available. For this reason, we have limited our detailed analysis to projects identified for funding in FY-82 and FY-83. The resulting lists of affected projects are included as Appendix A, FY-82 & 83, and Appendix B, FY-84 & 85.

The FY-82 & 83 information tabulates as follows:

	Total Step 3 and Step 2/3 Projects NYS Priority List	Step 3 and Step 2/3 Projects Affected by ICE	% of Total
FY-82	116	43	37%
FY-83	73	37	50%

For the purposes of this report, we have assumed that New York State's annual allocation will continue at the current level (approximately $350 million) and further, $300 million of New York State's allocation will be used annually to fund Step 3 and Step 2/3 projects. This translates into total eligible Step 3 and Step 2/3 costs of $400 million based on a 75% Federal grant.

Trends which were apparent from this segment of our study are:

A. Forty to fifty percent of identified Step 3 and Step 2/3 projects during any fiscal year will be affected. We use 45% in the study.

B. The total eligible Step 3 and Step 2/3 project costs that could be funded during any year are approximately $400 million.

C. The dollar amounts excluded by ICE are approximately 5% of the total eligible costs during any year. This is based on total Step 3 and Step 2/3 project dollars compared to estimates of the dollar amounts to be excluded by ICE.

The projected fiscal impacts are:

I. Total Project Dollars Affected

Step 3 & Step 2/3 Program	Affected by ICE	Project Dollars Affected
$400 million	45%	$180 million

II. Dollars attributable to industrial use which are ineligible due to ICE:

Step 3 & Step 2/3 Program	ICE Percent Attributable to Industrial Flow	ICE Dollars Ineligible
$400 million	5%	$20 million

To assess the impact of ICE, we developed an equation which shows the effect in terms of dollar amounts. The reason for developing the equation is that ICE will definitely cause delays in all steps of the grant process. As previously mentioned, projects are already slowing down due to municipalities and industry being unable to assess the impacts of ICE. In the calculations, we use a one-year delay which is conservative and an annual increase in construction costs of 9.1%. Engineering News-Record reported the annual increase of 9.1% in the third quarterly cost roundup.

Our detailed calculations are included as Appendix C and the results noted below:

- Of $21.82 million excluded annually, the result is only $4.08 million in reduced grant amounts. This is a direct result of project delay and inflation. This is a NET = minus $17.74 million

- The public absorbs the majority of the increase (this assumes industry pays all excluded costs).

  a) Industry's share = $1.97

  b) Public's share = $15.77

- In reality, the public pays an added $15.77 million in order to reduce grant amounts by $4.08 million.

We next developed a listing of projects including all industries known to be affected (See Appendix C). We also developed cost information for 32 of these projects for which we had information on an industry-by-industry basis (See Appendix E).

Using the information accumulated in Appendix E, we did case studies of three projects to show the effect of ICE on a project specific basis. The case studies include one project in a large community, the City of Rochester, and two projects in smaller communities, the Village of Rouses Point, and the Village of Fort Edward.

The detailed analyses are included as Appendix F and the results displayed below:

	C360745-04 Rochester	C360873-02 Champlain/ Rouses Pt.	C361021-02 Fort Edward
Pre-ICE			
Eligible Cost	$ 270,000,000	$ 3,333,000	$ 13,100,000
Federal Grant	202,500,000	2,500,000	9,825,000
Post-ICE			
Project Cost	297,000,000	3,660,000	14,400,000
Eligible Cost	258,400,000	2,550,000	11,900,000
% Subject to ICE	4.3	23.5	9.2
Federal Grant	211,400,000	2,100,000	9,750,000
Change in Costs to Public	23,900,000 increase	100,000 decrease	1,187,000 increase
Excluded Industrial Cost	11,600,000	783,000	1,200,000

We have also included as Appendix G a letter from the City of Gloversville which addresses the impact of ICE from the viewpoint of an affected community.

Findings

There are two major drawbacks which cause us to believe that institution of ICE provision at this late date in the Construction Grants Program is unwise.

The underlying intent of ICE is that the Federal Government (Public) can no longer afford to subsidize industry through the Construction Grants Program. Our calculations clearly indicate that ICE will generally increase project costs, resulting in increased costs to the public. Secondly, we are introducing a major inequity. Municipal Water Treatment Facilities which treat wastewater from industry, prior to ICE, received full funding, as opposed to those who are now in the process of a joint venture and will receive no funds for the industrial portion. The industry or the community must now "front end" the capital costs.

The funding restriction will introduce delays for those projects already in the grant program while industry and grantees evaluate the financial impact. In NYS, 40 - 50% of our projected FY-82 and FY-83 Step 3 projects will be affected. This delay is inevitable since industrial participation is determined during facility planning. Projects that will be affected must now go back for a complete re-evaluation of the impact. The Step 2 exemption which we assume was intended to address this concern is too late in the process to be of significant value. Again, funding criteria must be established before a project enters the program, not at the mid-point or end.

The negative impact ICE will have on affected projects in general will be magnified in the case of small, one or two industry communities. Historically, these communities and their industries have been partners in solving their water pollution control problems to the benefit of all. ICE may very well destroy this often beneficial relationship but, of even more concern is that it may well destroy needed water pollution control projects and the economic stability of a small community and the economies of scale which benefit us all. The question to be answered in this case is, Is the small savings of Construction Grants Program dollars expended for industry worth the increased overall cost to the general public and the extreme hardship we will impose on small communites? (Ref. Appendix E).

From a program standpoint, ICE is much too major a change to make at this late date in the program. From a dollar standpoint, the reduction in expenditure of public funds resulting from ICE may be negated by increased public costs due to project delay. From a grantee standpoint, it is just one more unnecessary delay and, in some cases, hardship caused by a retroactive change in government policy. ICE, for the present, should be repealed or, at the very minimum, implemented only for new projects entering the program.

NYSDEC
1/23/81

Calculation to Assess the Dollar Effect of ICE

We previously developed the following:

- Total Step 3+4 Program	$400 million
- Project dollars affected by ICE	180 million
- Ineligible for funding	20 million
- Federal allocation available for funding Step 3+4 projects	300 million

- First, we determine the APPARENT decrease in grant amounts due to ICE:

  a) ($400 million - $20 million) x 0.75 = $380 million x 0.75 or $285 million Federal participation with ICE

  b) $400 million x 0.75 = $300 million Federal participation without ICE

  c) APPARENT decrease in grant amounts due to ICE or:

  $300 million - $285 million = $15 million

  (Note: Our next set of calculations show why we emphasized "apparent".)

- Second, we assume a one-year delay in affected projects and put in increases in project costs due to inflation.

  a) Increase in project costs due to inflation is:

  $180 million x 0.091 = $16.38 million

  b) The actual Step 3+4 fiscal program is:

  $400 million + $16.38 million = $416.38 million

  c) The new eligible amount for funding is:

  $416.38 - ($20 x 1.091) = $415.84 million - $21.82 million or $394.56 million

  d) The Federal participation at 75% yields:

  $394.56 million x 0.75 = $295.92 million

  e) This results in an actual reduction in grant amounts of:

  $300 million - $295.92 million = $4.08 million

Conclusions:

- Of $21.82 million excluded, only $4.08 million is realized in reduced grant amounts.

- The net effect of ICE is a \$21.82 million increase minus \$4.08 million or:

  \$21.82 million - \$4.08 million = \$17.74 million
  Net = -\$17.74 million

- The public absorbs the majority of the \$17.74 million as follows:

  1. Assuming industry pays their proportionate share,
     Industry's share = 20/180 = 11.1% or
     \$17.74 million x 0.111 = \$1.97 million

  2. Public share = \$17.74 million - \$1.97 million
     or \$15.77 million

- Therefore, in reality, the public pays \$15.77 million in order not to reduce grant amounts by \$4.08 million

Case Studies of Specific Projects

I. Our first example project is C360745-04, Rochester Pure Water District, Monroe County. The total eligible cost without ICE is $270,000,000 and it is programed for fiscal year 1982. It should be noted that the $270 million is greater than the $180.0 million estimated to be affected in our previous calculations concerning the statewide program. This is due to the difference in fundable projects and programed projects (i.e., $467 million fundable and $1.5 billion programed). Monroe County is currently accelerating this project.

Using the same reasoning as in our study of the Statewide program, we can determine the effect of ICE on this project.

Total eligible cost without ICE - $270,000,000

We identified 17 industries which could be affected. They account for 4.3% of the project costs:

Rochester Gas & Electric	0.13%	Owen Illinois	0.06%
Aid to Hospitals	0.16%	Pfaudler Co.	0.38%
Flower City Tissue Mill	0.13%	Bauch & Lomb	0.13%
Mixing Equipment	0.15%	General Circuits	0.35%
Rochester Independent Packers	0.17%	Taylor Instruments	0.37%
Rochester Plating	0.07%	Ritter Equipment	0.09%
Rochester GMC	0.14%	E.J. Dupont	0.62%
Kleen-Bright	0.09%	Singer Education	0.14%
Olin Corp.	0.34%		

Eligible amount after excluding portion attributable to industry:

$270 - ($270 x 4.3%) = $270 - 11.6 = $258.4 million

Federal participation with ICE:

$258.4 x 75% = $193.8

Federal participation without ICE:

$270 x 75% = $202.5 million

Apparent decrease in grant amount:

$202.5 - $193.8 = $8.7 million

Our next set of calculations adds in the cost due to a one-year delay in awarding the grant.

Added cost of a one-year delay:

$270 + ($270 x 9.1%)= $270 + $24.6 = $294.6 million

New amount eligible for Federal participation:

$294.6 - $11.6 - ($11.6 x 9.1%) = $294.6 - $12.7 or $281.9 million

Federal participation at 75%:

$281.9 x 75% = $211.4 million

Actual increase in grant amounts:

$202.5 - $211.4 = -$8.9 million (i.e., an expenditure)

The effect of ICE on this project is:

a) A $24.6 million increase in project costs

b) $8.9 million more in grant amounts when compared to a program not including an ICE provision.

c) The remainder ($15.7 million) is absorbed by the Grantee:

1. If industry paid for the portion attributable to Industry, they would absorb $15.9 x 4.3% or $0.7 million.

2. Therefore, the local share would be $15.0 million.

d) The net effect to the public is $8.9 + $15.0 = $23.9 million in added costs.

II. Our second example is a small community, Champlain (T) - Rouses Point (V), Clinton County, C360873-02. The total eligible cost without ICE is $3,333,000 and it is programed for fiscal year 1982. There is one industry of greater than 50,000 gpd which accounts for 23.5% of the project costs.

Total eligible cost without ICE - $3,333,000

The industry affected is:

Ayerst 23.5%

Eligible amount after excluding portion attributable to industry:

$3,333 - ($3,333 x 23.5%) = $3,333 - $0.783 or $2.55 million

Federal participation with ICE:

$2.55 x 75% = $1.91 million

Federal participation without ICE:

$3,333 x 75% = $2.50 million

Apparent decrease in grant amount:

$2.50 - $1.91 = $0.59 million

We now add in the costs due to a one-year delay in the project:

Added cost of a one-year delay:

$3.33 + ($3.33 x 9.1%) = $3.63 million

New amount eligible for Federal participation:

$3.63 - $0.78 - ($0.78 x 9.1%) = $3.63 - $0.85 or $2.78 million

Federal participation with ICE:

$2.78 x 75% = $2.1 million

Actual decrease in grant amount:

$2.5 - $2.1 = $0.4 million

The effect of ICE on this project is:

a) A $0.30 million increase in project costs

b) $0.40 million less in grant amounts

c) The net effect of ICE is $0.40 million minus $0.30 or:

$0.40 million - $0.30 million = $0.10 million
Net = $0.10 million not expended by public

III. Our third example is also a small community, the Village of Fort Edward, Washington County, C361021-02. The total eligible cost without ICE is $13.1 million. There are two industries of greater than 50,000 gpd which account for 9.2% of the project costs.

Total eligible cost without ICE - $13.1 million

The industries are:

Decora	4.4%	Chase Bag Co.	4.8%

Eligible amount after excluding portion attributable to industry:

$13.1 - ($13.1 x 9.2%) = $13.2 - $1.2 or $11.9 million

Federal participation with ICE:

$11.9 million x 75% = $8.935 million

Federal participation without ICE:

$13.1 million x 75% = $9.825 million

Apparent decrease in grant amount:

$9.825 - $8.935 = $0.89 million

We now add in the costs due to a one-year delay in the project:

$13.1 + ($13.1 x 9.1%) = $14.3 million

New amount eligible for Federal participation:

$14.3 - $1.2 - ($1.2 x 9.1%) = $14.3 - $1.3 or $13.0 million

Actual decrease in grant amount:

$9.825 million - $9.750 million = $0.075 million

The effect of ICE on this project is:

a) A $1.3 million increase in project cost

b) $0.075 million decrease in grant amount compared to a program without an industrial cost exclusion

c) The net effect of ICE is a $1.3 million increase minus $0.075 or:

   $1.3 million - $0.075 = $1.225 million
   Net = $1.225 million expended by public

d) The grantee absorbs most of the increase:

   1. Industries share = $1.225 x 9.2% or $0.113 million

   2. The remainder to the Village or:

      $1.3 - $0.113 = $1.187 million

STATE OF NORTH CAROLINA

I. Short Term Effect (From State Reported Data)

A. Overview

Fifteen communities, ranging in size from 2,300 to 241,000 with an average population of over 55,000, will be affected. The population of all the communities affected is over 827,000. The daily flow into the affected POTWs is 141 mgd of which 92 mgd, or 65 percent, is contributed by 97 affected industrial users. The estimated POTW construction cost is $87 million of which the industrial portion is $25 million, or 29 percent. The largest industrial groups affected are:

(1) Textile Mill Products, 12 mgd, $11 million,
(2) Food and Kindred Products, 8 mgd, $4 million,
(3) Chemicals and Allied Products, 3 mgd, $2 million.

B. Communities with populations under 100,000

Twelve communities, ranging in size from 2,300 to 95,400 with an average population of 25,600, will be affected. The population of all the communities affected is over 307,000. The daily flow into the affected POTWs is 66 mgd of which 21 mgd, or 32 percent, is contributed by 45 affected industrial users. The estimated POTW construction cost is $53 million of which the industrial portion is $16 million, or 30 percent. The largest industrial groups affected are:

(1) Textile Mill Products, 8 mgd, $9 million,
(2) Chemicals and Allied Products, 3 mgd, $2 million,
(3) Food and Kindred Products, 3 mgd, $2 million.

Community	Population	Industrial Portion	Community	Population	Industrial Portion
Asheboro	10,800	$1,700,000	Morganton	33,600	$5,700,000
Durham, Northside	95,500	900,000	++New Bern	14,700	400,000
+Forest City	7,200	500,000	Randleman	2,300	800,000
+Greenville	29,100	400,000	++Roanoke Rapids	13,500	2,000,000
+High Point, Westside	63,200	500,000	++Roxboro	5,400	900,000
++Lexington	17,200	1,900,000	++Thomasville	15,200	300,000
			TOTAL	307,700	$16,000,000

+ Exceeds State Unemployment rate of 6.3% which is below the National rate.
++ Exceeds National Unemployment rate of 7.1%.

STATE OF NORTH CAROLINA

C. Communities with populations between 100,000 and 1,000,000

Three communities, ranging in size from 133,000 to 241,000, will be affected. The daily flow into the affected POTWs is 75 mgd of which 71 mgd, or 95 percent, is contributed by 52 affected industrial users. The estimated POTW construction cost is $35 million of which the industrial portion is over $8 million, or 23 percent. The largest industrial groups affected are:

(1) Textile Mill Products, 4 mgd, $2 million,
(2) Food and Kindred Products, 5 mgd, $2 million.

Community	Population	Industrial Portion
Buncombe County	145,000	$4,500,000
Charlotte	241,000	900,000
Winston Salem	133,000	3,200,000
TOTAL	519,000	$8,600,000

II. Long Term Effect (From EPA Needs Survey

The 1980 Needs Survey reported that 84 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $482 million of which the industrial portion would be $157 million, or 33 percent. Of these 84 needed facilities, 52, or 62 percent, will serve communities with populations of less than 10,000.

III. Potential Effect (Data from Other Sources)

Various public and private sources have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
++Goldsboro	?	$?
++Lumberton	?	?
+Mount Airy	8,200	?
+Rocky Mount	35,000	40,000,000
TOTAL	43,200	$40,000,000

+ Exceeds State unemployment rate of 6.3% which is below the National rate.
++ Exceeds National unemployment rate of 7.1%.

STATE OF NORTH DAKOTA

I. Short Term Effect (From State Reported Data)

Two communities, ranging in size from 15,500 to 72,000 with an average population of 43,750, will be affected. The combined population of the communities affected is over 87,500. The daily flow into the affected POTWs is 10 mgd of which 1.3 mgd, or 13 percent, is contributed by 6 affected industrial users. The estimated POTW construction cost is $4 million of which the industrial portion is $.2 million, or 5 percent. The largest industrial group affected is Food and Kindred Products, .8 mgd, $.1 million.

Community	Population	Industrial Portion
Fargo	72,000	$ 75,000
West Fargo	15,500	75,000
TOTAL	87,500	$ 150,000

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 7 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $28 million of which the industrial portion would be $5 million, or 18 percent. Of these 7 needed facilities, 2, or 29 percent, will serve communities with populations of less than 10,000.

STATE OF OHIO

1. Short Term Effect (From State Reported Data)

A. Overview

Forty-six communities, ranging in size from 6,100 to over 524,300 with an average population of 47,800, will be affected. The combined population of the communities affected is over 2,000,000. The daily flow into the affected POTWs is 566 mgd of which 95 mgd, or 17 percent, is contributed by 260 affected industrial users. The estimated POTW construction cost is $671 million of which the industrial portion is $115 million, or 17 percent. The largest industrial groups affected are:

(1) Transportation Equipment, 17 mgd, $20 million,
(2) Machinery, except Electrical, 7 mgd, $8 million,
(3) Fabricated Metal Products, 6 mgd, $7 million,
(4) Food and Kindred Products, 6 mgd, $8 million.

B. Communities with populations under 100,000

Forty-three communities, ranging in size from 6,100 to 73,400, with an average population of 275,000, will be affected. The population of the communities affected is over 1,100,000. The daily flow into the affected POTWs is 237 mgd of which 42 mgd, or 18 percent, is contributed by 154 affected industrial users. The estimated POTW construction cost is $398 million of which the industrial portion is $52 million, or 13 percent. The largest industrial groups affected are:

(1) Fabricated Metal Products, 6 mgd, $7 million,
(2) Transportation Equipment, 6 mgd, $8 million,
(3) Food and Kindred Products, 6 mgd, $8 million.

Community	Population	Industrial Portion	Community	Population	Industrial Portion
++Alliance	25,800	$ 260,000	++Ironton	14,000	$ 2,440,000
++Ashland	20,300	795,000	++Jackson	7,000	850,000
++Avon Lake	12,500	1,900,000	++Lancaster	40,000	450,000
++Barberton	27,000	1,150,000	++Mansfield	57,000	1,930,000
++Bedford Hght	12,000	220,000	++Marietta	16,000	800,000
++Bellefontaine	11,000	2,100,000	+++Maryville	8,000	650,000
++Berea	20,000	40,000	++Mentor	42,000	640,000
++Bryan	7,000	300,000	++Miami District	11,000	500,000
++Conneaut	15,000	190,000	++Middletown	48,000	5,700,000
++Clyde	6,100	800,000	Montgomery Co, E.	52,000	2,200,000
++Defiance	16,000	770,000	++Newark	40,000	4,700,000
Delaware	20,000	350,000	++Norwalk	14,000	520,000
++Easterly	24,000	650,000	Orrville	8,000	300,000
++Elyria	32,000	1,400,000	++Piqua	20,000	1,100,000
Euclid	60,000	2,500,000	++Sidney	18,000	730,000
Findlay	38,000	1,540,000	++Springfield	73,400	890,000

STATE OF OHIO

Fostoria	19,000	$1,700,000
Fremont	19,000	2,920,000
Geneva	7,300	650,000
Greenville	13,000	590,000
++Summit Co.	36,200	$ 150,000
++Tiffin	20,400	520,000
++Troy	18,500	540,000
++Twinsburg	7,200	220,000
++Warren	59,500	4,900,000
Wooster	20,000	350,000
++Zanesville	38,000	400,000
TOTAL	1,073,200	$52,305,000

++ Exceeds National Unemployment rate of 7.1%.
+++ Exceeds State Unemployment rate of 8.1% which exceeds the National rate.

C. Communities with populations between 100,000 and 1,000,000

Three communities, ranging in size from 194,861 to 524,304 with an average population of 32,000, will be affected. The population of all the communities affected is over 956,000. The daily flow into the affected POTWs is 330 mgd of which 53 mgd, or 16 percent, is contributed by 106 affected industrial users. The estimated POTW construction cost is $274 million of which the industrial portion is over $63 million, or 23 percent. The largest industrial groups affected are:

(1) Transportation Equipment, 10 mgd, $12 million,
(2) Machinery, except Electrical, 4 mgd, $4 million,
(3) Rubber and Miscellaneous Plastic, 5 mgd, $5 million.

Community	Population	Industrial Portion
+++Akron	240,000	$23,000,000
Columbus	524,000	22,000,000
+++Dayton	195,000	18,000,000
TOTAL	959,000	$63,000,000

+++ Exceeds State unemployment rate of 8.1% which exceeds the National rate.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 82 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $806 million of which the industrial portion would be $203 million, or 25 percent. Of these 82 needed facilities, 42, or 51 percent, will serve communities with populations of less than 10,000.

STATE OF OHIO

III. Potential Effect (Data from Other Sources)

Various public and private sources reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
Canton	115,000	?
Cincinnati	460,000	?
Deta	5,000	?
Lima	55,000	?
Montpelier	5,000	?
Sylvania	15,000	?
TOTAL	655,000	?

STATE OF OKLAHOMA

I. Short Term Effect (From State Reported Data)

A. Overview

Nine communities, ranging in size from 1,200 to over 270,000 with an average population of 58,530, will be affected. The combined population of the communities affected is over 526,800. The daily flow into the affected POTWs is 64 mgd of which 5 mgd, or 7 percent, is contributed by 18 affected industrial users. The estimated POTW construction cost is $51 million of which the industrial portion is $6 million, or 12 percent. The largest industrial group affected is Food and Kindred Products, 3 mgd, $4 million.

B. Communities with populations under 100,000

Seven communities, ranging in size from 1,200 to 77,000 with an average population of 20,700, will be affected. The combined population of these communities is over 144,800. The daily flow into the affected POTWs is 19 mgd of which 3 mgd, or 16 percent, is contributed by 10 affected industrial users. The estimated POTW construction cost is $29 million of which the industrial portion is over $5 million. The largest industrial group affected is Food and Kindred Products, 2 mgd, $4 million.

Community	Population	Industrial Portion
Anadarko	7,000	$ 562,000
Ardmore	40,700	1,530,000
Guymon	12,200	1,550,000
+Jay	3,500	710,000
Midwest	77,000	190,000
++Stillwell	3,200	349,000
++Westville	1,200	590,000
TOTAL	144,800	$5,481,000

+ Exceeds State unemployment rate of 5.1% which is below the National rate.
++ Exceeds National unemployment rate of 7.1%.

C. Communities with populations between 100,000 and 1,000,000

Two communities ranging in size from 112,000 to 270,000 will be affected. The daily flow into the affected POTWs is 45 mgd of which 1 mgd, or 2 percent, is contributed by 8 affected industrial users. The estimated POTW construction cost is $23 million of which the industrial portion is over $.4 million or about 2 percent. The largest industrial groups affected are Food and Kindred Products, and Petroleum and Related Industries.

STATE OF OKLAHOMA

Community	Population	Industrial Portion
Norman	112,000	$120,000
Tulsa	270,000	287,000
TOTAL	382,000	$407,000

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 17 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $53 million of which the industrial portion would be $8 million or 15 percent. Of these 17 needed facilities, 9, or 53 percent, will serve communities with populations of less than 10,000.

III. Potential Effect (Data from Other Sources)

Various public and/or private sources have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
++Muskogee	40,000	?

++ Exceeds National unemployment rate of 7.1%.

STATE OF OREGON

1. Short Term Effect (From State Reported Data)

A. Overview

Four communities, ranging in size from 7,000 to over 400,000 with an average population of 129,000, will be affected. The combined population of the communities affected is over 500,000. The daily flow into the affected POTWs is 156 mgd of which 42 mgd, or 27 percent, is contributed by 21 affected industrial users. The estimated POTW construction cost is $16 million of which the industrial portion is $6 million, or 35 percent. The largest industrial groups affected are:

(1) Paper and Allied Products, 32 mgd, $5 million
(2) Food and Kindred Products, 5 mgd, $8 million.

B. Communities with populations under 100,000

Three communities, ranging in size from 7,000 to 80,000 with an average population of 39,000, will be affected. The combined population of the communities affected is over 117,000. The daily flow into the affected POTWs is 56 mgd of which 34 mgd, or 60 percent, is contributed by 5 affected industrial users. The estimated POTW construction cost is $10 million of which the industrial portion is $6 million, or 60 percent. The largest industrial groups affected are:

(1) Paper and Allied Products, 32 mgd, $5 million,
(2) Food and Kindred Products, 2 mgd, $.6 million.

Community	Population	Industrial Portion
++ Eugene	80,000	$ 600,000
+++ St. Helens	7,000	5,000,000
+++ Springfield	30,000	90,000
TOTAL	117,000	$5,690,000

++ Exceeds National unemployment rate of 7.1%.
+++ Exceeds State unemployment rate of 8.0% which exceeds the National rate.

C. Communities with populations between 100,000 and 1,000,000

Portland, with a population of 400,000, will be affected. The daily flow into the affected POTWs is 100 mgd of which 8 mgd, or 8 percent, is contributed by 16 affected industrial users. The estimated POTW construction cost is $4 million of which the industrial portion is over $.3 million, or 5 percent. The largest industrial group affected is Food and Kindred Products, 3 mgd, $.1 million.

STATE OF OREGON

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 11 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $308 million of which the industrial portion would be $58 million, or 19 percent. Of these 11 needed facilities, 2, or 10 percent, will serve communities with populations of less than 10,000.

III. Potential Effect (Data from Other Sources)

Various public and private sources have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
Salem	?	?

STATE OF PENNSYLVANIA

I. Short Term Effect (From State Reported Data)

A. Overview

Ten communities, ranging in size from 5,000 to over 1,040,000 with an average population of 189,000, will be affected. The combined population of the communities affected is over 1,887,000. The daily flow into the affected POTWs is 319 mgd of which 18 mgd, or 6 percent, is contributed by 88 affected industrial users. The estimated POTW construction cost is $212 million of which the industrial portion is $16 million, or 8 percent. The largest industrial groups affected are:

(1) Chemicals and Allied Products, 2 mgd, $7 million,
(2) Food and Kindred Products, 2 mgd, $4 million.

B. Communities with populations under 100,000

Seven communities, ranging in size from 5,000 to 87,000 with an average population of 34,000, will be affected. The combined population of these communities is over 239,000. The daily flow into the affected POTWs is 49 mgd of which 3 mgd, or 7 percent, is contributed by 23 affected industrial users. The estimated POTW construction cost is $100 million of which the industrial portion is $11 million, or 11 percent. The largest industrial groups affected are:

(1) Chemicals and Allied Products, 1 mgd, $6 million,
(2) Food and Kindred Products, .5 mgd, $3 million.

Community	Population	Industrial Portion
+++Berwick	12,000	$ 526,000
Hanover	30,000	1,400,000
Lower Wissahickon	10,000	4,509,000
New Holland	5,000	830,000
++Springettsbury Township	87,000	700,000
West Chester	20,000	2,670,000
++York	75,000	720,000
TOTAL	239,000	$11,355,000

++ Exceeds National unemployment rate of 7.1%.
+++ Exceeds State unemployment rate of 7.7% which exceeds the National rate.

C. Communities with populations between 100,000 and 1,000,000

Lancaster, with a population of 308,000, and Wyoming Valley, with a population of 300,000, have daily flows of 30 mgd and 40 mgd respectively. In Lancaster, the industrial flow is 1 mgd or 3 percent of the total flow; in Wyoming Valley, industrial flows also account for 1 mgd, or about 3 percent of the total flow. The estimated POTW construction cost in Lancaster is $40 million of which the industrial portion is $1 million or 3 percent. In Wyoming Valley, POTW construction cost is estimated to be $30 million of which the industrial portion is about $.4 million or 1 percent. The largest industrial groups affected are:

STATE OF PENNSYLVANIA

(1) Food and Kindred Products, .8 mgd, $1 million,
(2) Chemicals and Allied Products, .4 mgd, $.5 million.

Community	Population	Industrial Portion
Lancaster	308,000	$1,250,000
+++Wyoming Valley S.A. (Lucerne Co.)	300,000	387,000
TOTAL	608,000	$1,637,000

+++ Exceeds State unemployment rate of 7.7% which is above the National rate.

D. Community with population over 1,000,000

Allegheny County, with a population of 1,040,000, has a daily flow of 200 mgd. In Allegheny County, the industrial flow is 13 mgd, or 7 percent of the total flow of 174 mgd. The estimated POTW construction cost in Allegheny County is $32 million of which the industrial portion is $32 million, or 6 percent. The largest industrial groups affected are:

(1) Primary Metal Products, 2 mgd, $.5 million,
(2) Transportation Equipment, 1 mgd, $.2 million,
(3) Food and Kindred Products, .9 mgd, $.2 million.

Community	Population	Industrial Portion
Allegheny County	1,040,000	$ 2,722,000

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 60 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $466 million of which the industrial portion would be $81 million or 17 percent. Of these 60 needed facilities, 33, or 55 percent, will serve communities with populations of less than 10,000.

STATE OF PENNSYLVANIA

III. Potential Effect (Data from Other Sources)

Various public and private sources have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
+++Chester	60,000	?
Fleetwood	3,000	?
TOTAL	63,000	?

+++ Exceeds State unemployment rate of 7.7% which is above the National rate.

STATE OF RHODE ISLAND

I. Short Term Effect (From State Reported Data)

Four communities, ranging in size from 2,500 to 18,000 with an average population of over 7,450, will be affected. The combined population of the communities affected is over 46,000. The daily flow into the affected POTWs is 7 mgd of which 2 mgd, or 28 percent, is contributed by over 10 affected industrial users. The estimated POTW construction cost is $21 million of which the industrial portion is $2 million. The largest industrial groups affected are:

(1) Textile Mill Products, .4 mgd, $.8 million,
(2) Fabricated Metal Products, .3 mgd, $1 million.

Community	Population	Industrial Portion
Bristol	15,000	$1,030,000
East Greenwich	2,500	1,790,000
Warwick	10,500	2,110,000
+West Warwick	18,000	845,000
TOTAL	46,000	$5,785,000

+ Exceeds State unemployment rate of 5.9% which is below the National rate.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 6 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $170 million of which the industrial portion would be $64 million, or 38 percent. None of the needed facilities serve communities with populations of less than 10,000.

STATE OF SOUTH CAROLINA

I. Short Term Effect (From State Reported Data)

Fort Mill, with a population of 4,500, and North Charleston, with a population of 61,200, will be affected. The combined population of the communities affected is over 65,700. The two area POTWs have a daily flow of 39 mgd of which 3 mgd, or 9 percent, is contributed by 8 affected industrial users. The estimated POTW construction cost is $19 million of which the industrial portion is $2 million. The cost in North Charleston is $17 million, with an industrial portion of $2 million; the Fort Mill POTW has a construction cost of $2 million of which the industrial portion is negligible. The largest industrial group affected is Textile Mill Products, .8 mgd, $.2 million.

Community	Population	Industrial Portion
++Fort Mill	4,500	$ 87,000
+North Charleston	61,200	1,474,000
TOTAL	65,700	$1,561,000

+ Exceeds State unemployment rate of 6.7% which is below the National rate.
++ Exceeds National unemployment rate of 7.1%.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 39 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $111 million of which the industrial portion would be $53 million or 47 percent. Of the 39 needed facilities, 24, or 62 percent, will serve communities with populations of less than 10,000.

III. Potential Effect (Data from Other Sources)

Various public and private sources have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
++Aiken	14,600	$550,000
Lancaster	10,000	?
TOTAL	24,600	$550,000

++ Exceeds National unemployment rate of 7.1%.

STATE OF SOUTH DAKOTA

I. Short Term Effect (From State Reported Data)

Five communities, ranging in size from 400 to 46,000 with an average population of 13,400, will be affected. The combined population of the communities affected is over 67,100. The daily flow into the affected POTWs is 17 mgd of which 2 mgd, or 12 percent, is contributed by 8 affected industrial users. The estimated POTW construction cost is $15 million of which the industrial portion is $1 million, or 6 percent. The largest industrial group affected is Food and Kindred Products, 1.5 mgd, $1 million.

Community	Population	Industrial Portion
Hoven	700	$ 50,250
Huron	13,000	55,000
+Madison	7,000	500,000
Pollock	400	350,000
+Rapid City	46,000	260,000
TOTAL	67,100	$1,215,250

+ Exceeds State unemployment rate of 4.9% which is below the National rate.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 14 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $96 million of which the industrial portion would be $21 million, or 22 percent. Of these 14 needed facilities, 7, or 50 percent, will serve communities with populations of less than 10,000.

STATE OF TENNESSEE

I. Short Term Effect (From EPA Data)

Four communities, ranging in size from 130,000 to 700,000 with an average population of 352,500, will be affected. The combined population of the communities affected is over 1,410,000. The daily flow into the affected POTWs is 388 mgd of which 76 mgd, or 19 percent, is contributed by 143 affected industrial users. The estimated POTW construction cost is $198 million of which the industrial portion is about $39 million. The largest industrial groups affected are:

(1) Food and Kindred Products, 26 mgd, $7 million,
(2) Chemicals and Allied Products, 13 mgd, $6 million,
(3) Textile Mill Products, 4 mgd, $5 million,
(4) Fabricated Metal Products, 5 mgd, $3 million.

Community	Population	Industrial Portion
++Chattanooga	130,000	$20,080,000
Knoxville	180,000	5,255,000
Memphis	700,000	4,819,000
Nashville	400,000	8,840,000
TOTAL	1,410,000	$38,994,000

++ Exceeds National unemployment rate of 7.1%.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 42 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $550 million of which the industrial portion would be $191 million, or 35 percent. Of these 42 needed facilities, 21, or 50 percent, will serve communities with populations of less than 10,000.

III. Potential Effect (Data from Other Sources)

Various private and public sources have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

STATE OF TENNESSEE

Community	Population	Industrial Portion
++Dayton	4,400	?
++Jamestown	2,000	?
++Johnson City	50,000	?
++Lewisburg	7,500	240,000
++Livingston	3,200	?
Maryville	14,000	?
Rogersville	4,100	?
++Sewanee	2,000	?
++Smithville	3,000	?
TOTAL	90,200	$240,000

++ Exceeds National unemployment rate of 7.1%.

N.B. By letter dated March 2, 1981, the State of Tennessee Department of Public Health reported: "In summary, we believe that the information you (EPA) have regarding the 'Short-Term' and 'Long-Term' impacts of the ICE to the State of Tennessee is unfounded and grossly inflated relative to what the actual impacts will be."

These communities have not been deducted from the National totals.

STATE OF TEXAS

I. Short Term Effect (From State Reported Data)

A. Overview

Six communities, ranging in size from 10,500 to 879,000 with an average population of 179,000, will be affected. The population of all the communities affected is over 1,173,000. The daily flow into the affected POTWs is 190 mgd of which 15 mgd, or 8 percent, is contributed by 88 affected industrial users. The estimated POTW construction cost is $201 million of which the industrial portion is $50 million, or 24 percent. The largest industrial group affected is Food and Kindred Products, 7 mgd, $17 million.

B. Communities with populations under 100,000

Four communities, ranging in size from 10,500 to 22,800 with an average population of 13,850, will be affected. The population of all the communities affected is over 55,400. The daily flow into the affected POTWs is 12 mgd of which 3 mgd or 25 percent is contributed by 11 affected industrial users. The estimated POTW construction cost is $8 million of which the industrial portion is $4 million or 50 percent. The largest industrial groups affected are:

(1) Food and Kindred Products, 2 mgd, $2 million,
(2) Textile Mill Products, .1 mgd, $2 million.

Community	Population	Industrial Portion
Brenham	10,500	$2,900,000
Corsicana	22,800	323,000
Sulphur Springs	11,600	513,000
Vernon	11,500	363,000
TOTAL	55,400	$4,109,000

C. Communities with populations between 100,000 and 1,000,000

Amarillo, with a population of 137,500, and San Antonio, with a population of 879,000, have daily flows of 24 mgd and 154 mgd, respectively. In Amarillo, the industrial flow is 2 mgd or 8 percent of the total flow; in San Antonio industrial flows account for 11 mgd or 7 percent of the total flow. The estimated POTW construction cost in Amarillo is $7 million of which the industrial portion is $2 million or 29 percent. In San Antonio, the POTW construction cost is estimated to be $186 million of which the industrial portion is about $43 million or 24 percent. The largest industrial group affected is Food and Kindred Products, 5 mgd, $15 million.

STATE OF TEXAS

Community	Population	Industrial Portion
Amarillo	137,500	$ 2,000,000
+San Antonio	879,000	43,800,000
TOTAL	1,116,500	$45,800,000

+ Exceeds State Unemployment rate of 4.4% which is below the National rate.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 94 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $875 million of which the industrial portion would be $108 million, or 12 percent. Of these 94 needed facilities, 29, or 31 percent, will serve communities with populations of less than 10,000.

III. Potential Effect (Data from Other Sources)

Various public and private souces have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
Dallas	1,000,000	?
++El Paso	350,000	?
+Fort Worth	450,000	?
Houston	1,500,000	?
Nacogdoches	25,000	?
+Sherman	30,000	?
TOTAL	3,355,000	?

+ Exceeds State Unemployment rate of 4.4% which is below the National rate.
++ Exceeds National Unemployment rate of 7.1%.

STATE OF UTAH

I. Short Term Effect (From State Reported Data)

Central Weber County, with a population of 142,000, and Salina, with a population of 2,000, have daily flows of 41 mgd and .5 mgd, respectively. In Central Weber County, the industrial flow is .3 mgd, or about 1 percent of the total flow; in Salina, however, industrial flows account for .03 mgd or 6 percent of the total flow. The estimated POTW construction cost in Central Weber County is $19 million of which the industrial portion is $3 million, or 16 percent. In Salina, the POTW cost is about $.5 million of which the industrial portion is about $.4 million, or 87 percent. The largest industrial group affected is Food and Kindred Products, .3 mgd, $3 million.

Community	Population	Industrial Portion
Central Weber	142,000	$3,040,000
Salina	2,000	419,000
TOTAL	144,000	$3,459,000

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 13 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $74 million of which the industrial portion would be $8 million or 11 percent. Of these 13 needed facilities, 9, or 70 percent, will serve communities with populations of less than 10,000.

III. Potential Effect (Data from Other Sources)

Various public and private sources have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
++Kamas	1,000	$ 798,000
Logan	27,000	138,000
++Moroni	1,000	966,000
North Davis	78,000	1,240,000
Salt Lake City	165,000	1,600,000
Springville	12,000	260,000
TOTAL	284,000	$5,002,000

++ Exceeds National unemployment rate of 7.1%.

STATE OF VERMONT

I. Short Term Effect (From State Reported Data)

Four communities, ranging in size from 600 to 12,500, with an average population of 6,025, will be affected. The combined population of the communities affected is over 24,100. The daily flow into the affected POTWs is 12 mgd of which 2 mgd, or 18 percent, is contributed by 7 affected industrial users. The estimated POTW construction cost is $16 million of which the industrial portion is $2 million. The largest industrial group affected is Food and Kindred Products, 1.5 mgd, $2 million.

Community	Population	Industrial Portion
++Bennington	12,500	$ 500,000
St. Albans	8,000	628,000
Swanton	3,000	200,000
++Troy	600	656,000
TOTAL	24,100	$1,984,000

++ Exceeds National unemployment rate of 7.1%.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 10 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $50 million of which the industrial portion would be $8 million, or 16 percent. Of these 10 needed facilities, 7, or 70 percent, will serve communities with populations of less than 10,000.

III. Potential Effect (Data from Other Sources)

Various public and private sources have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
Hartford Wilder	2,000	?

STATE OF VIRGINIA

I. Short Term Effect (From State Reported Data)

Pepper's Ferry, with a population of 30,000, and Waynesboro, with a population of 14,000, have daily flows of 3 mgd and 4 mgd respectively. In Pepper's Ferry, the industrial flow is .6 mgd or 20 percent of the total flow; in Waynesboro, however, industrial flows account for .2 mgd or 10 percent of the total flow. The estimated construction cost in Pepper's Ferry is $3 million of which the industrial portion is $.7 million or 24 percent. The Waynesboro POTW construction cost is estimated to be $4 million of which the industrial portion is about $.3 million or 8 percent. The largest industrial groups affected are Food and Kindred Products, .2 mgd, $1 million, and Electrical and Electronic Machinery, .3 mgd, $.6 million.

Community	Population	Industrial Portion
++Pepper's Ferry	30,000	$ 749,000
++Waynesboro	14,000	332,000
TOTAL	44,000	$1,081,000

++ Exceeds National unemployment rate of 7.1%.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 13 needed facilities (treatment plants and interceptors) each have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $139 million of which the industrial portion would be $17 million, or 12 percent. Of the 13 needed facilities, 6, or 46 percent, will serve communities with populations of less than 10,000.

III. Potential Effect (Data from Other Sources)

Various public and/or private sources have reported that the community shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
+Winchester	25,000	$2,500,000 (Food and Kindred Products)

+ Exceeds State unemployment rate of 5.1% which is below the National rate.

STATE OF WASHINGTON

I. Short Term Effect (From State Reported Data)

Walla Walla, with a population of 23,000, and Prosser, with a population of 10,000, will be affected. The combined population of the communities affected is over 33,000. The two area POTWs have a daily flow of 12 mgd of which 1 mgd, or 9 percent, is contributed by 5 affected industrial users. The estimated POTW construction cost is $7 million of which the industrial portion is $1.2 million. The cost in Prosser is $3 million, with an industrial portion of $1 million; the Walla Walla POTW has a construction cost of $4 million of which the industrial portion is $.2 million. The largest industrial group affected is Food and Kindred Products, 1 mgd, $1 million.

Community	Population	Industrial Portion
Walla Walla	23,000	$ 217,000
++Prosser	10,000	1,050,000
TOTAL	33,000	$1,267,000

++ Exceeds National unemployment rate of 7.1%.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 17 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $670 million of which the industrial portion would be $100 million, or 15 percent. Of these 17 needed facilities, 17, or 59 percent, will serve communities with populations of less than 10,000.

III. Potential Effect (Data from Other Sources)

The communities shown below were reported by various public and/or private sources. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
+++Everett	54,000	?

+++ Exceeds State unemployment rate of 7.5% which exceeds the National rate.

STATE OF WEST VIRGINIA

I. Short Term Effect (From State Reported Data)

Martinsburg, with a population of 15,000, will be affected. The daily flow into the affected POTW is 3 mgd of which .2 mgd or 7 percent is contributed by 1 affected industry. The estimated POTW construction cost is $3 million of which the industrial portion is $.2 million, or 7 percent. The only industrial group affected is Food and Kindred Products.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 8 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 12 percent of the total POTW flow. The construction cost is estimated to be $36 million of which the industrial portion would be $13 million or 12 percent. Of these 8 needed facilities, 4, or 50 percent, will serve communities with populations of less than 10,000.

III. Potential Effect (Data from Other Sources)

Various public and private sources have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
Charleston	250,000	$?
Chester	4,000	400,000
Huntington	75,000	?
N. Beckley, PSD	4,500	700,000
Wheeling	50,000	
	383,500	$1,100,000

STATE OF WISCONSIN

I. Short Term Effect (From State Reported Data)

A. Overview

Seven communities, ranging in size from 1,900 to over 725,000 with an average population of 134,000, will be affected. The combined population of the communities affected is over 940,000. The daily flow into the affected POTWs is 380 mgd of which 66 mgd, or 17 percent, is contributed by 218 affected industrial users. The estimated POTW construction cost is $1.1 billion of which the industrial portion is $213 million or 19 percent. The largest industrial groups affected are:

(1) Food and Kindred Products, 24 mgd, $71 million,
(2) Fabricated Metal Products, 5 mgd, $15 million.

B. Communities with populations under 100,000

Five communities, ranging in size from 1,900 to 17,500 with an average population of 9,000, will be affected. The combined population of the communities affected is over 45,000. The daily flow into the affected POTWs is 9.3 mgd of which 3.6 mgd or 33 percent is contributed by 15 affected industrial users. The estimated POTW construction cost is $38 million of which the industrial portion is $17 million or 45 percent. The largest industrial groups affected are:

(1) Food and Kindred Products, 2 mgd, $14 million,
(2) Electrical and Electronic Machinery, .2 mgd, $13 million.

Community	Population	Industrial Portion
+Butte Des Morts	5,000	$ 380,000
Plymouth	6,100	2,150,000
++Abbotsford	1,900	130,000
+Marshfield	17,500	2,750,000
++Beaver Dam	14,500	11,500,000
TOTAL	45,100	$16,910,000

+ Exceeds State unemployment rate of 6.3% which is below the National rate.
++ Exceeds National unemployment rate of 7.1%.

C. Communities with populations between 100,000 and 1,000,000

Two communities, ranging in size from 170,000 to 725,000, will be affected. The daily flow into the affected POTWs is 370 mgd of which 63 mgd, or 17 percent, is contributed by 203 affected industrial users. The estimated POTW construction cost is $1,094 billion of which the industrial portion is over $196 million or 18 percent. The largest industrial groups affected are:

STATE OF WISCONSIN

(1) Food and Kindred Products, 22 mgd, $67 million,
(2) Fabricated Metal Products, 5 mgd, $15 million.

Community	Population	Industrial Portion
Madison	170,000	$ 15,000,000
+Milwaukee	725,000	181,000,000
TOTAL	895,000	$196,000,000

+ Exceeds State unemployment rate of 6.3% which is below the National rate.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 63 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $897 million of which the industrial portion would be $258 million or 29 percent. Of these 63 needed facilities, 53, or 64 percent, will serve communities with populations of less than 10,000.

III. Potential Effect (Data from Other Sources)

Various public and private sources have reported that the communities shown below could be affected. In many cases, the information presented did not fully or clearly identify the effect of the industrial cost exclusion (ICE) on the community.

Community	Population	Industrial Portion
Bloomer	3,100	$ 195,000
+Menasha	14,200	510,000
++Peshtigo	2,800	11,000,000
TOTAL	20,100	$11,705,000

+ Exceeds State unemployment rate of 6.3% which is below the National rate.
++ Exceeds National unemployment rate of 7.1%.

Conclusions

An analysis of Wisconsin's industries which discharge to municipal wastewater treatment systems resulted in the following general observations concerning the possible impact of the Industrial Exclusion in Wisconsin.

The ultimate implementation of the Industrial Exclusion will cost Wisconsin industries approximately $375 million. This represents a cost of $132 thousand for each municipal industrial discharger with a 50,000 gpd or equivalent flow.

Only 25 (2 percent) of the state's industries with flows equal to or greater than 50,000 gpd or equivalent will be funded before the cut-off dates of the Industrial Exclusion. This assessment is based on data contained in the State's FY 81 & 82 priority lists.

Wisconsin can truly claim to be the nation's dairy state since the dairy industry represents 29 percent of the impacted industries in municipalities of less than 50,000 people. Approximately 50 percent of the dairy industry is concentrated in small communities of less than 3500 people. However, the communities of less than 3500 people represent only 2 percent of the state's total population. The state's dairy industry represents approximately 11% of the total industries which will be ultimately impacted by the Industrial Exclusion.

As the Industrial Exclusion presently stands, its greatest impact in Wisconsin will be on the larger municipalities since 25 percent of Wisconsin's industrial municipalities contain 78 percent of the impacted industries. The city of Milwaukee contains 35 percent of the impacted industries in the state, however, the Industrial Exclusion would allow an exemption for larger municipalities, the burden of industrial wastewater treatment in Wisconsin would be borne by industries located outside major urban population centers. Such an exemption would provide a meaningful encouragement for industries to locate in the exempted urban communities.

In the State of Wisconsin, an interesting situation would develop if the State's largest municipality, Milwaukee, would be the only exempted community. The major burden of industrial wastewater treatment remains with 30 of the State's larger municipalities. These municipalities have populations above 10,000 people and contain 40 percent of the state's impacted industries. A Milwaukee exemption would tend to limit industrial growth outside the Milwaukee wastewater treatment system.

INDUSTRIAL WASTEWATER TREATMENT COSTS
for WISCONSIN INDUSTRIES WITH MUNICIPAL DISCHARGES

$375 Million estimated municipal wastewater treatment costs for all 512 industries with flows equal to or greater than 50,000 gpd or equivalent.

$16 Million estimated municipal wastewater treatment costs for 608 industries with flows less than 50,000 gpd or equivalent.

$132 Thousand estimated average municipal wastewater treatment costs for each industry with 50,000 gpd or equivalent flow.

$309 Million estimated municipal wastewater treatment costs for 373 industries with flows equal to or greater than 50,000 gpd or equivalent on State FY 81 and 82 priority lists which will not be funded before cut-off dates of Industrial Exclusion.

$11 Million estimated municipal wastewater treatment costs for 25 industries with flows equal to or greater than 50,000 gpd or equivalent on State FY 81 and 82 priority lists which will be funded before cut-off dates of Industrial Exclusion.

WISCONSIN MUNICIPAL INDUSTRIAL DISCHARGERS

(100%)	1120	Total number of Wisconsin industries which discharge to municipal wastewater treatment facilities.
(88%)	982	Industries located in municipalities with one or more 50,000 gpd or equivalent industry.
(12%)	138	Industries located in municipalities with total municipal industrial flows of less than 50,000 gpd or equivalent.
(46%)	512	Industries with flows equal to or greater than 50,000 gpd or equivalent.
(54%)	608	Industries with flows less than 50,000 gpd or equivalent.

(33%)	373	Industries with flows equal to or greater than 50,000 gpd or equivalent are located in municipalities that will not be funded before cut-off dates of the Industrial Exclusion (State FY 81 and 82 priority list).
(2%)	25	Industries with flows equal to or greater than 50,000 gpd or equivalent located im municipalities that will be funded before cut-off dates of the Industrial Exclusion (State FY 81 and 82 priority lists).

WISCONSIN MUNICIPALITIES

(100%) 707 Wisconsin Municipalities with wastewater treatment facilities.

(32%) 224 Wisconsin Municipalities have industrial wastewater flows.

(23%) 166 Wisconsin Municipalities have industrial wastewater flows to or greater than 10,000 gpd.

(18%) 124 Wisconsin Municipalities have at least one industrial flows equal to or greater than 50,000 gpd or equivalent.

(100%) 124 Municipalities with at least one industrial flow equal to or greater than 50,000 gpd or equivalent.

(61%) 76 Municipalities have only one industry with a flow equal to or greater than 50,000 gpd or equivalent.

(14%) 17 Municipalities have only two industries with a flow equal to or greater than 50,000 gpd or equivalent.

(2%) 3 Municipalities have only one 50,000 gpd or equivalent industry which exceeds 50% of total municipal flow.

(48%) 60 Municipalities with at least one industrial flow equal to or greater than 50,000 gpd or equivalent on State FY 81 & 82 priority list will not be funded before cut-off dates of industrial cost exclusion.

(5%) 6 Municipalities with at least one industrial flow equal to or greater than 50,000 gpd or equivalent on State FY 81 & 82 priority list will be funded before cut-off dates of industrial cost exclusion.

MUNICIPALITIES with INDIVIDUAL INDUSTRIAL FLOW of 50,000 gpd or equivalent

Number	Municipality Population Range	1970 Pop.	Industrial Population (%)	State Population (%)	Total No. industries / Total No. industries with 50,000 gpd or equivalent flows	Total No. industries / Total No. industries with 50,000 gpd or equivalent flows (%)
56	Less than 3500	98,950	4	2	86/66	9/13
37	3500 - 10,000	225,100	10	5	129/59	13/12
23	10,000 - 50,000	599,200	27	13	241/115	25/22
6	50,000 - 100,000	426,300	20	10	151/69	15/13
2	Greater than 100,000	858,000	39	18	375/203	38/40
124	Totals	2,207,550	100	48	982/512	100/100
	State Total	4,417,900		100	1120	

TABLE #1

Distribution of 50,000 gpd or equivalent industries in Wisconsin communities of less than 3,500 population

	ndustries Number		Number SIC	Type Industries	%	Industries Number	Type General Industry
8)	5	-	201	Meat Products	(79)	48-Good	Products
54)	33	-	202	Dairy Products			
10)	6	-	203	Canned Fruits & Vegetables			
2)	1	_	205	Bakery Products			
5)	3	-	208	Beverages			
2)	1	-	261	Pulp Mills	(10)	6-	Paper & Allied Products
7)	4	-	262	Paper Mills			
2)	1	-	265	Paper Board Boxes			
2)	1	-	334	Smelting & Refining Metal	(3)	2-	Primary Metals
2)	1	-	343	Heating Equipment			
3)	2	-	344	Fabricated Structual Metal	(5)	3-	Fabricated Metals
2)	1	-	346	Metal Forgings			
2)	1	-	363	Household Appliances	(2)	1-	Electoral Equipment
2)	1	-	371	Motor Vehicles & Equipment	(2)	1-	Transportation Equipment
100)	61			Total	(100)	61	

TABLE #2

Distribution of 50,000 gpd or equivalent industries in Wisconsin communities of 3500 to 10,000 population

%	Industries		Number SIC	Type Industries	%	Industries Number	Type General Industry
	3	-	201	Meat Products	(61)	34	Food Products
(34)	19	-	202	Dairy Products			
(9)	5	-	203	Canned Vegetables			
	1	-	204	Grain Mill Products			
	1	-	205	Bakery Products			
	2	-	206	Sugar Products			
	1	-	208	Beverages			
	2	-	209	Misc. Food Products			
	1	-	225	Knitting Mill		1	Textile Products
	2	-	264	Paper Products		2	Paper & Allied Products
	1	-	306	Rubber Products		1	Rubber Products
	2	-	311	Leather Finishing		2	Leather Products
	1	-	329	Nonmetallic Mineral Products		1	Stone Products
	1	-	342	General Hardware	(11)	6	Fab. Metal Products
	1	-	344	Structual Metal Products			
	1	-	345	Screws, Bolts, Nuts Products			
	1	-	347	Coatings, Engravings			
	1	-	349	Ammunitions			
	3	-	351	Engines	(11)	6	Machinery
	1	-	352	Farm Equipment			
	1	-	355	Special Machinery			
	1	-	358	Refrigeration			
	1	-	363	Household Appliances		2	Electrical Appliances
	1	-	364	Electric Equipment			
	1	-	382	Measuring Equipment		1	Instruments
(100)	56			Total	(100)	56	

TABLE #3

Distribution of 50,000 gpd or equivalent industries in Wisconsin communities of 10,000 to 50,000 population

Industries %	Industries Number		Number SIC	Type Industries	%	Industries Number Type General Industry
(5)	4	-	201	Meat Products	(36)	28-Food Products
(20)	15	-	202	Dairy Products		
(5)	4	-	203	Canned Fruits & Vegetables		
(5)	4	-	208	Beverages		
	1	-	209	Misc. Food Products		
	1	-	225	Knitting Mill		1-Textile Products
	2	-	262	Paper Mill	(8)	6-Paper & Allied Products
	3	-	263	Paperboard Mill		
	1	-	265	Paperboard Containers		
	1	-	282	Plastics		2-Chemical Products
	1	-	286	Organic Chemicals		
	1	-	301	Tires		1-Rubber Products
(5)	4	-	311	Leather Finishing	(5)	4-Leather Product
	1	-	336	Non-Ferrous Foundries		1-Primary Metals
	1	-	342	General Hardware	(10)	8-Fab. Metal Products
	1	-	343	Heating Equipment		
	1	-	344	Structual Metal Products		
(5)	4	-	346	Metal Forings		
	1	-	348	Ammunitions		
(5)	4	-	351	Engines	(8)	6-Machinery
	2	-	353	Construction Equipment		
	1	-	362	Electrical Apparatus	(8)	6-Electrical Equipment
	2	-	363	Household Appliances		
	1	-	367	Electronic Components		
	2	-	369	Misc. Electrical		
	1	-	371	Motor Vehicles		2-Transportation Equipment
	1	-	373	Ship Building		
	1	-	382	Measuring Equipment		1-Instruments
	1	-	394	Toys, Amusement Goods		3-Misc. Manufacturing

TABLE #3 (cont.)

Distribution of 50,000 gpd or equivalent industries in Wisconsin communities of 10,000 to 50,000 population

Industries %	Number		Number SIC	Type Industries
	2	-	395	Pens, Office Material
	1	-	399	Misc. Manufacturing
	1	-	491	Electric Services
	1	-	514	Grocery Products
	1	-	721	Laundry
(5)	4	-	806	Hospitals
(100)	77			

%	Industries Number	Type General Industry
	1-	Misc. Manufacturing
	1-	Utilities Services
	1-	Wholesale Trade
	1-	Personal Services
(5)	4-	Health Services
(100)	77	

WISCONSIN MUNICIPAL DISCHARGE INDUSTRIES IMPACTED BY INDUSTRIAL COST EXCLUSION

Municipality	Pop. 1970	P.L. funding before cut-off	Total Industrial Flows(MGD)		Total No, Industries/ No. industries with 50,000 gpd or equiv. flow	Total Estimated construction grant award(000)	S.T.P. exist- flow MGD	Number SIC
			_50,000 gpd	-50,000 gpd or equivalent				
Abbotsford	1400	N		.02	1/1	742	.200	2022
Adams	1400	--		.02	1/1	169	.300	2643
Allenton SD#1	350			.07	1/1		.100	3444
Antigo	900		207	.21			2.500	3409,2023,2099
Appleton	60,000	N	3.625	4.91	19/8	36	16.500	
Arcadia	2,000		.346	.35	2/1	1021	.480	2016
Baldwin	1.400		.201	.10	2/1		.220	2026
Barron	2,300	N	.126	.126	2/1	1080	1.830	2021
Beaver Dam	14,300	N	1.710	1.73	6/5	15,025	4.350	2033,2022,3631, 2099,5142
Beloit	35,700	N	2.077	2.08	10/8	1,951	9.500	4411,2021,2013, 3519,2631
Beloit, IN	3,500		--	.03	1/1		.500	2086
Berlin	5,300		.114	.11	4/1		.690	3111
Black Creek	900		---	.045			.100	
Bloomer	3,100	N	.389	.39	2/2	289	.850	2033,2026
Bonduel	1,000		.060	.06			.250	2035
Boscobel	2,500			.02	1/1		.190	2022
Brookfield	--	N				20,402	5.000	
Burlington	7,500		--	.04	6/1		2.500	2066
Butte des Morts U.D.	400	N	.060	.06	2/1	8,689	.600	2051
Cadott	1,000	N	---	.01	1/1	579	.150	2022
Caroline S.D.#1	3,500		--	.01			.090	2022
Cedarburg	7,700	N	.134	.17	6/2	328	3.000	2026,3519
Chaseburg	3,500			.01	1/1		.080	2022
Chilton	1,300	N	.324	.32	5/4	1,842	.550	3341
Chippewa Falls	12,300	N	.653	.65	8/2	1,608	3.500	2082,2011
Clear Lake	700	N	.050	.98	2/2	420	.250	2032,2026
Coon Valley	600	N	--	.03	1/1	385	.090	2023

WISCONSIN MUNICIPAL DISCHARGE INDUSTRIES IMPACTED BY INDUSTRIAL COST EXCLUSION

Municipality	Pop. 1970	P.L. funding before cut-off	Total Industrial Flows(MGD)		Total No, Industries/ No. industries with 50,000 gpd or equiv. flow	Total Estimated construction grant award(000)	S.T.P. exist- flow MGD	Number SIC
			_50,000 gpd	-50,000 gpd or equivalent				
Cumberland	1800			.05	3/1		.260	2022
DePere	13300		.226	.27	10/3		3.450	2011, 2021 2631
Delevan	5500	Y	.071	.07	1/1	96	1.000	3829
Denmark	1400		.075	.07			.230	2021
Dresser	500	N	.173	.17	1/1	216	.250	2022
Eau Claire	44600		1.597	1.64	13/7		16.200	3011, 2013 3679, 2026, 8062
Edgar	3500		--	.03	1/1	287	.200	2011
Elroy	1500	N	.060	.06	1/1	935	.140	2022
Fennimore	1900		--	.02	3/1		.620	2022
Fond du Lac	35500		1.397	1.40	13/7		11.100	3519, 2036 3111, 3519 3694
Fort Atkinson	9200	N	.453	.45	7/3	2475	2.700	2011, 2011 2038
Germantown	7000		--	.04	1/1		1.000	2026
Gillett	1300	N	.055	.06	1/1	472	.210	3469
Grafton	6000	N	.126	.07	8/1	5566	1.040	3519
Green Bay Met	87800	N	18.351	18.34	31/16	1147	52.010	
Greenwood	1000	N	--	.07	2/2	305	.150	2022, 2022
Hartford	6500		.613	.66	6/3		3.000	3519, 2033 3111
Heart of the Valley	3500		.058	.06	2/1		2.550	2611
Hillsboro	1200	N	--	.01	1/1	552	.200	2022
Holland, Tn. of	3500	N	.190	.19	1/1	60	.200	2022
Horicon	3400	N	.081	.08	2/1	1054	.750	3444
Janesville	46400	N	3.034	2.46	10/9	741	16.000	2869, 2033 3951, 2026 3951
Jefferson	5400	N	.304	.30	2/2	37	1.720	2013, 2047
Kenosha	79200	N	6.106	6.11	15/13	34993	23.000	
Kewaskum	1900		.143	.19	4/3		1.000	2026, 2083 3631

WISCONSIN MUNICIPAL DISCHARGE INDUSTRIES IMPACTED BY INDUSTRIAL COST EXCLUSION

Municipality	Pop. 1970	P.L. funding before cut-off	Total Industrial Flows(MGD) _50,000 gpd	Total Industrial Flows(MGD) -50,000 gpd or equivalent	Total No, Industries/ No. industries with 50,000 gpd or equiv. flow	Total Estimated construction grant award(000)	S.T.P. exist-flow MGD	Number SIC
Kiel	2800	Y	.212	.21	2/2	3000	.600	2022, 2023
Kohler	1700		.210	.21	1/1		.630	3431
LaCrosse	51000	N	5.563	5.61	23/13	1852	20.000	
Lake Mills	3500		.199	.20	3/2		.660	3585, 3551
Lancaster	3800		.087	.09	1/1		.380	2022
Little Chute	5400		--	.04	1/1		.620	2022
Lomira	1100		--	.03	1/1		.490	2083
Madison Met.	173000	N	4.859	4.92	47/25	25357	50.000	20, 20, 34, 20, 33
Manitowoc	33400		2.896	2.98	20/15		15.500	2083, 3732 2033, 3469 3429
Marshfield	15600	N	.333	.42	5/5	6700	3.500	8062,2022 2435,2026 2023
Mayville	4100	Y	.272	.27	7/2	2990	1.000	3444,2022
Menasha, Tn SD#4-East	7000	N	.060	.06	8/1	5109	1.500	2649
Menasha, Tn SD#4-West	7100	N	.227	.23	2/2	5109	1.000	2647,2647
Menomonee Falls	31700		.107	.11	11/2		2.900	3944,3713
Menomonie	11300	N	.107	.11	1/1	21	2.880	2023
Merrill	9500		.096	.10	1/1		2.100	3496
Milan S.D.	3500		--	.04	1/1		.060	2022
Milwaukee MSC	685000	N	56.995	58.00	328/178	1,068,312	320.000	20, 34, 36 37, 31
Minong	3500	N	.070	.07	1/1	980	.160	2011
Monroe	8600	N	.230	.35	9/5	5577	2.200	2083, 2099 2022, 2022 2066
Mosinee	2400		.060	.06	1/1		.550	2621
Mount Horeb	2400		--	.06	3/1		.600	2022

WISCONSIN MUNICIPAL DISCHARGE INDUSTRIES IMPACTED BY INDUSTRIAL COST EXCLUSION

Municipality	Pop. 1970	P.L. funding before cut-off	Total Industrial Flows(MGD) _50,000 gpd	Total Industrial Flows(MGD) -50,000 gpd or equivalent	Total No,Industries/ No.industries with 50,000 gpd or equiv. flow	Total Estimated construction grant award(000)	S.T.P. exist-flow MGD	Number SIC
Neenah-Menasha S.C.	23000		2.276	2.35	17/8		13.000	2621,2621 2023,2631 7218
Neilsville	2800		.056	.06	3/1		.520	3714
Nekoosa	2400		.081	.08	2/1		.500	2621
New London	5800	N	.078	.08	2/1	2277	.720	2022
Niagara	2300	N	.075	.08	1/1	600	.390	2621
Norwalk	400		--	.03	1/1		.140	2022
Oconomowoc	8700		.110	.11	5/1		4.020	2099
Oconto	4700	N	.127	.13	1/1	2197	1.760	2036
Oshkosh	53100	N	.509	.39	24/4	1996	20.000	
Owen	1400	N	.168	.17	1/1	800	.750	2023
Peshtigo	2800		4.217	4.24	2/2		4.650	2621,2013
Pewaukee	3300		.058	.06	3/1		.760	
Platteville	5600	N	--	.03	1/1	4438	1.600	2022
Plymouth	5800	N	.293	.33	5/3	6239	.630	2022,5143, 2022
Port Washington	8800		.065	.06	2/1	261	1.250	3524
Portage	7800	N	.058	.06	5/1	660	1.300	2251
Prairie Du Chien	5500	N	.630	.63	2/2	93	2.000	3069,3291
Pulaski	1700		.160	.16	1/1		.770	2033
Racine	95200	Y	3.469	2.88	39/15	4280	52.000	
Reedsburg	4600	N	.350	.35	4/1	498	1.700	2023
Rhinelander	8200		--	.01	4/1		1.900	2026
Rice Lake	7300	N	.128	.15	4/3	2760	1.500	2023,2024 3429
Richland Center	5100		.210	.21	5/1		1.600	2022
Ripon	7100		.185	.23	3/3		2.000	3633,2052 2035
Sauk-Prairie SC	2400	N	.404	.40	2/2	540	.750	2033,2023
Seymour	2200	N	.060	.06	2/1	1513	.370	2022,

WISCONSIN MUNICIPAL DISCHARGE INDUSTRIES IMPACTED BY INDUSTRIAL COST EXCLUSION

Municipality	Pop. 1970	P.L. funding before cut-off	Total Industrial Flows(MGD)		Total No, Industries/ No. industries with 50,000 gpd or equiv. flow	Total Estimated construction grant award(000)	S.T.P. exist-flow MGD	Number SIC
			50,000 gpd	-50,000 gpd or equivalent				
Shawano Lake S.D. #1	6500		--	.05	4/1		3.000	2023
Sheboygan	48500	N	2.496	2.53	30/12	69	18.390	3111,2821 3469,3361, 2252
Slinger	1000		--	.03	1/1		.140	2026
South Milwaukee	23300	N	.970	.97	9/5	450	6.000	3532,3111 3699,3993 3111
Sparta	6300		.141	.14	2/2		1.300	2026,3479
Spencer	1200		--	.03	1/1		.300	2022
Stevens Point	23500	N	--	.03	5/1	597	4.100	
Sturgeon Bay	6800	N	.104	.10	1/1	475	1.500	2033
Superior	32200	N	.204	.20	9/1	508	5.000	2022
Thorp	1500		--	.02	1/1		.350	2022
Two Rivers	13100		.373	.37	7/2		4.400	3469,3469
Waterloo	2300		--	.02	2/1		.540	2035
Watertown	15600		.381	.38	10/3		5.200	3822,3444 2086
Waukesha	45900		1.537	1.54	20/8		8.500	3489,8062 2035,3519 2026
Waupaca	4300	N	.238	.24	1/1	264	1.250	2649
Waupun	7900	N	.210	.21	2/1	4856	1.260	3452
Wausau	32800	N	.620	.65	14/7	799	9.200	3621,8062 2651,2022 3531
West Bend	16600		1.064	1.06	6/1		2.500	3634
Weyauwega	1400		.050	.05	1/1		.510	2022

WISCONSIN MUNICIPAL DISCHARGE INDUSTRIES IMPACTED BY INDUSTRIAL COST EXCLUSION

Municipality	Pop. 1970	P.L. funding before cut-off	Total Industrial Flows (MGD) 50,000 gpd	Total Industrial Flows (MGD) -50,000 gpd or equivalent	Total No. Industries/ No. industries with 50,000 gpd or equiv. flow	Total Estimated construction grant award(000)	S.T.P. exist-flow MGD	Number SIC
Whitehall	1500		.364	.36	1/1		1.070	2011
Whitewater	12000		.154	.20	3/2		2.000	
Winneconne	1600	N	--	.02	1/1	629	.350	2022
Wisconsin Rapids	18600	Y	.244	.24	4/1	2208	4.000	3433
Wittenberg	900	N	--	.03	1/1	1200	.160	2022
Wrightstown	1000		--	.01	2/1			2022
	Totals		138.887	142.27				

STATE OF WYOMING

It has been reported that the communities and industries in Wyoming will not be affected by the industrial cost exclusion.

TERRITORY OF AMERICAN SAMOA

I. Short Term Effect (From Territory's Reported Data)

The Territory of American Samoa with a population of 35,000 will be affected. The area POTW has a daily flow of 3 mgd of which 2.1 mgd or 70 percent is contributed by 2 affected industries. The estimated POTW cost is $9 million, of which the industrial portion is $2 million or 22 percent. The only industrial group affected is Food and Kindred Products, 2 mgd, $2 million.

DISTRICT OF COLUMBIA

It has been reported that the District of Columbia will not be affected by the industrial cost exclusion.

GUAM

It has been reported that the communities and industries in Guam will not be affected by the industrial cost exclusion.

NORTHERN MARIANAS

It has been reported that the communities and industries in the Northern Marianas will not be affected by the industrial cost exclusion.

PACIFIC TRUST TERRITORIES

It has been reported that the communities and industries in the Pacific Trust Territories will not be affected by the industrial cost exclusion.

TERRITORY OF PUERTO RICO

I. Short Term Effect (From State Reported Data)

The treatment plant construction discussed below is contingent upon the requirement to meet secondary treatment standards.

San Juan, with a population of 450,000, may be required to design and construct a POTW with a daily flow of 100 mgd of which 5 mgd, or 5 percent, will come from industrial users. The estimated POTW construction cost is $100 million of which the industrial portion is $5 million.

Bayaman, with a population of 180,000, may also be required to design and construct a POTW with a daily flow of 55 mgd of which 3 mgd, or 5 percent, will come from industrial users. The estimated POTW construction cost is $60 million of which the industrial portion is $3 million.

II. Long Term Effect (From EPA Needs Survey)

The 1980 Needs Survey reported that 9 needed facilities (treatment plants and interceptors) have substantial industrial flows. That is each has an industrial flow over 100,000 gallons per day and more than 16 percent of the total POTW flow. The construction cost is estimated to be $283 million of which the industrial portion would be $31 million, or 11 percent. Of these 9 needed facilities, 7 will serve communities with populations of less than 10,000.

VIRGIN ISLANDS

It has been reported that the communities and industries in the Virgin Islands will not be affected by the industrial cost exclusion.

APPENDIX A

Analyses from industries affected
by the industrial cost exclusion

The letters in this appendix are from industries affected by the industrial cost exclusion. Unlike the letters in Appendix B, these letters contain data regarding industrial participation in publicly owned treatment works.

The letters are from:

1. American Meat Institute
2. Association of Manufacturers
3. CIBA-GEIGY Corporation
4. J.M. Smucker Company
5. Kraft Inc.
6. Milk Industry Foundation . International Association of Ice Cream Manufacturers
7. Miller Brewing Company
8. Nestle Enterprises, Inc.

AMI AMERICAN MEAT INSTITUTE
Serving The Meat Industry Since 1906

January 14, 1981

Mr. Thomas A. Whalen
Industrial Users Study
Municipal Construction Div.
(WH-547) Room 1217 A
401 M Street, S.W.
Washington, D.C. 20460

Dear Mr. Whalen:

The American Meat Institute is a national trade association representing the interests of over 300 meat packing and processing firms. Since many of our member companies would be affected, we are grateful for the opportunity to comment on "Grants for Construction of Treatment Works, Exclusion of Major Industrial Users; Impact Analyses".

We have reviewed the comments submitted by the National Food Processors Association on this matter and fully concur with the numerous concerns they have cited. Although our members' plant operations are not seasonal in nature, our problems with Section 3 of PL 96-483 are similar, in all other respects, to those of NFPA member firms.

We have attempted to obtain some information on the potential impact of this law on our members by conducting a small sampling. Nine companies reported that 30 plants would be adversely affected. Half of these plants are in rural communities where the company's waste volume is a significant portion of the POTW's current capacity. It was projected that 3 plants (10%) would be closed, 2 plants would build their own treatment facility, 21 plants would try to secure their own funds to pay off, proportionate to use, their share of bond issues it was assumed the cities would float to pay the industrial capacity funds required and 4 plants were undecided about what they might be forced to do. All predicted much higher costs which would ultimately have to be passed along to the consumer.

We hope that this information will be useful to you in preparation of the impact analysis for the Congress. We strongly support repeal of Section 3 of PL 96-483.

Very truly yours,

John J. Birdsall

John J. Birdsall, Ph.D.
Director, Scientific Affairs

JJB/mkw

P.O. Box 3556, Washington, D.C. 20007 • 1700 North Moore Street, Arlington, VA. 22209 • 703/841-2400

Executive Offices

MILK INDUSTRY FOUNDATION · INTERNATIONAL ASSOCIATION OF ICE CREAM MFRS.

December 30, 1980

Mr. Thomas Whalen
Industrial Users Study
Municipal Construction Division (WH-547)
Room 1217A
401 M Street, SW
Washington, DC 20460

Dear Mr. Whalen:

We are responding to your request for comments concerning "Grants for Construction of Treatment Works, Exclusion of Major Industrial Users; Impact Analysis" which appeared on page 79573 in the Federal Register December 1, 1980. We have not been able to identify every milk processor or ice cream manufacturer that will be affected by Section 3 of Public Law 96-483. Since most of these processors are now discharging waste to a publicly owned treatment works (POTWs), we assume these POTWs will respond to your request.

Several member plants, however, have been identified as having difficulty in making final arrangements with municipalities and therefore would be affected if Section 3 becomes a reality November 15, 1981. These are highlighted in the attachment. Information for additional plants will be forthcoming in the near future and we request that they be given consideration in your analysis.

If you desire additional information regarding the attached situations, please contact me.

Sincerely,

Austin Rhoads

Austin T. Rhoads
Administrative Assistant

ATR:map
Attachment

Bennington, Vermont

We understand that Bennington has applied for a $10-15 million grant. The Environmental Protection Agency (EPA) has notified the town that they must hook-up with a closed sewer system. Bennington has planned for an open sewer using gravity flow, rather than the closed sewer which would require a pumping station. It has been reported that EPA will not grant any funds unless the more elaborate system is planned.

Fairdale Farms (a dairy processing plant) is involved with these plans. They are negotiating with Bennington regarding the disposal of the sludge from the up-graded municipal system. The original plans called for Fairdale Farms to pay $12,000 a year. This will be greatly changed if the closed system is mandated. This plant's waste exceeds the exemption provided in Section 3 of Public Law 96-483 and would be greatly hampered in November.

New Port, Maine

The H. P. Hood Company has a cottage cheese processing plant in this community. This plant is working with the town in preparing the paperwork requesting federal financial assistance to build a waste treatment faciligy. The company signed the agreement a year ago.

If Section 3 is enforced, this plant would probably close since they could not meet their financial obligations. The plant employs 50 persons.

Troy, Vermont

Dairy processors affected: Kraft cheddar cheese plant, H. P. Hood and Yankee Milk.

The Kraft plant handles 400,000 pounds of milk a day or 1.5 million pounds of milk per year. Kraft is leasing the buildings and grounds from Yankee Milk. Hood and Yankee Milk also have receiving stations in operation in Troy.

We understand that dairy processing is the only industry in Troy. The small population uses septic tanks for sanitary sewage disposal.

The largest contributor of waste is through the generation of whey in cheese processing. This whey is concentrated. The BOD load from this waste is more than 100 pounds per day.

The preliminary design of the waste treatment plant is 80,000 gallons per day. One industry would use 50,000 gallons of this capacity. The cost of the project is $1.75 million. Of this, industry will be forced to pay $100,000 for sewers only.

Step One Grant was established in 1977. It has been reported that it is impossible to attain Step Three by November 1981. Industry's obligation then would be an additional $600,000. With Section 3 of P.L. 96-483, Kraft would be forced to pay $700,000, which is a large sum, especially with today's interest rates. Without Section 3, the cost would be $100,000 and no interest payments.

In all probability, the dairy processing plants would not remain in Troy if such a financial burden were imposed.

Kraft
INC

Howard B. Brown, P.E.
Director
Environmental and Energy Resources

December 31, 1980

Mr. Thomas A. Whalen
Industrial Users Study
Municipal Construction Division (WH-547)
U.S. Environmental Protection Agency
Room 1217A
401 M Street, S.W.
Washington, D.C. 20460

RE: (WH-FRL 1685-5)
Grants for Construction of Treatment
Works, Exclusion of Major Industrial
Users; Impact Analysis

Dear Mr. Whalen:

Kraft, Inc. is a major diversified food processor with some ninety-six (96) manufacturing plants in the United States. Eighty-nine of these plants discharge wastewater into publicly owned wastewater treatment works (POTW) with industrial flows above and below the 50,000 gallons per day cut-off. Thus Kraft is both directly and indirectly affected by P.L. 96-483 provisions that grant assistance shall not be used for the construction of any portion of a publicly owned treatment works designed to serve industrial users.

We have by telephone provided you with some detail on the potential effect of P.L. 96-483 on one of our plants, and at your suggestion we relayed the same information to Mr. Austin Rhoads, Secretary, Dairy Industry Committee (DIC) Task Group on Environmental Matters. It is our understanding that the DIC group has provided you with consolidated information relative to impact on a segment of the dairy industry.

An incomplete analysis of P.L. 96-483 impact on Kraft facilities shows that twelve or more POTW communities contemplate construction for which grant monies would not be available. The capital amounts for these range from $75,000 to $1,000,000 and may total about $6,000,000. In only one instance is a new POTW involved. Estimates of capital funding requirements for projects not yet in Step I consideration are not possible at this time.

Kraft Court, Glenview, IL 60025 (312) 998-3085

While the Agency is obligated to study and report to the Congress not later than March 15, 1981, it is obvious that a study within that time frame will be less than complete and the aggregate economic impact understated by a substantial degree. Also it will not be possible to identify all specific communities and accurately assess longer term impact on rural, high unemployment and economically distressed areas.

The Congressional study requirement is fraught with a host of uncertainties; multiple combinations of probabilities and possibilities; and many unpredicatable events of significance. The unfair and unsound burden placed upon the Agency suggests that the concept of funding was not clearly fathomed by those who drafted the legislation.

While the Agency is required to be specific, the EPA report to the Congress should be qualified with a degree of rational philosphy and set forth those generalities which might serve to enhance Congressional understanding. The EPA report will be incomplete without some elucidative dialogue on industrial wastes, wastewater treatment, industry participation in community affairs, industrial capacity in municipal systems, O&M costs of POTW's, design for industrial capacity, industrial options - past and present, capital replacement factors, funding alternatives, etc. Some examples follow:

(1) The 50,000 GPD cut-off is an arbitrary number capricious in nature; it represents a sanitary sewage flow from about 500 people; an insignificant 5,000 gallons or less volume of industrial waste from a food processor; a very significant and different waste load if from a metal plater, etc., etc. To the layman (or Congressman) 50,000 is a large number, to the industrial waste professional it is a number which must be technically qualified and relate to something if it is to be meaningful. The legislation is broad brush, whereas case studies and site specific considerations are a basic requirement.

(2) Most industries now discharging into a POTW are locked into that municipal sewer and the POTW. The day of exercising the option of self treatment is gone. In most cases a business decision kept the industry in the community or led the industry to join hands with the community of which it is an integral part, and which it supports via many tax revenue schemes. Elimination of federal funding changes the rules after the business decision.

(3) Projects for future funding will in many instances involve highly complex and expensive treatment systems. The simple or relatively low cost base level treatment facilities have been constructed. The relative economics of AWT plants, which may or may not be caused by industry parameter contribution, are on an escalated scale, and the attendant O&M costs and capital replacement demands may represent severe economic consequences for the community.

(4) The considerations of energy and disposal of waste residuals (sludges, etc.) are different today than in the past. The auxiliary equipment requirements, capital and operating costs and financing costs can combine to bankrupt a community or encourage industry to abandon operations in a given location. The assistance need is greater today than in the past.

(5) While ICR imposed an unfair and duplicative burden, the capital funds granted were interest-free. In today's money market, inflated interest rates, and up-front non-productive capital requirements can weigh heavy in a local business decision. The need for federal subsidy is greater now than in the past.

(6) While legislative remedy is required, it is possible that this will not come about within the required time frame. In view of this likelihood and in order to provide an equitable, orderly phase-in of P.L. 96-483, the cut-off dates should apply to grant application rather than grant award. The Step II-May 15, 1980, and Step III-November 15, 1981, grant award cut-off dates for industry participation in the Municipal Construction Grants Program do not adequately provide for backlog and delays encountered by municipalities currently having grant applications in-process. In a number of instances, these delays may not be the fault of the municipality.

The elimination of ICR was a fair and just undoing. However, the elimination of federal funding of the industrial portion of existing POTW sewerage systems and treatment works is even more unfair than the previous ICR provisions. The law should be further amended so that existing industries physically locked into municipal systems would not be required to fund that which is beyond their control and at a time when the only alternative is to sever the community partnership it enjoys and supports via its fair share contribution.

We appreciate the opportunity to respond to the Agency's request for comments. We trust that the EPA report to the Congress will include a specific recommendation on the needed legislative modification.

Very truly yours,

H B Brown

Howard B. Brown, P.E.
Director

/bb

POTENTIAL EFFECTS OF SECTION 3 OF PUBLIC LAW 96-483 ON THE WARREN COUNTY SEWER DISTRICT NUMBER 3 AND CIBA-GEIGY CORPORATION, GLENS FALLS, NEW YORK

1. WARREN COUNTY REGIONAL SEWER PROJECT

This project resulted from many years of study and activity to determine the best method to meet the established water quality standard for the Hudson River. Based on these studies, EPA and the New York Department of Environmental Conservation (NYSDEC) determined that the Hudson River can best be protected from pollution by having the wastewater flows of Hercules (the predecessor of CIBA-GEIGY) and now CIBA-GEIGY treated in a regional wastewater treatment system.

CIBA-GEIGY Corporation and the Warren County Sewer District Number 1 executed a Facilities Agreement in October 1979.

2. COMPLIANCE SCHEDULES

CIBA-GEIGY and the City of Glens Falls are under compliance schedules imposed by the Enforcement Division of USEPA, Region II, to (1) tie-in to an outfall diffuser and (2) provide secondary treatment for their wastewaters. An inability to meet the mandated compliance date also places the continued operation of our manufacturing facility in jeopardy.

3. EFFECTS ON THE WCSD #1 PROJECT AND CIBA-GEIGY

3.1 The regional treatment plant's design capacity is based on CIBA-GEIGY's participation in the project. CIBA-GEIGY represents approximately 20% of the average flow and 28% of the BOD load.

3.2 Financing of the Warren County Project is Based on The Construction Grant Program. Section 3 is disruptive to the entire financial base of the Warren County Project:

- The entire financial basis for funding the project would be changed. The District would have to find alternative funding sources for long-term financing, if possible.
- The District would have to execute new agreements with industrial users. No guidelines for establishing such agreements are available; new approaches would have to be developed. This would also require the reexamination of allocation provisions for capital costs which have proven to be so administratively difficult under the ICR Program.
- Because of the change of the financial base, Warren County would most likely have to return to the voters for approval of additional bonds to cover the costs attributable to industrial users.

Additionally, since Section 3 would deprive industries of interest free loans previously available through the industrial cost recovery system for their share of capital costs over the useful life of the treatment works, industries wishing to utilize POTW's would now have to provide their entire share within a short time of POTW construction. This would divert significant levels of capital dollars from new productive facilities which are needed to maintain or improve employment levels.

3.3 Agreements and Understandings

CIBA-GEIGY executed the agreement with the District fully expecting to participate in industrial cost recovery and operating costs. The Section 3 prohibition at this late stage in the progress of the District's project is onerous on CIBA-GEIGY and the WCSD.

Section 3 now discourages participation by industries in POTW's.

> EPA and DEC have long encouraged the concept of industrial participation in POTW's. This amendment could result in a proliferation of point source discharges on the Hudson River and the loss of benefits resulting from economy of scale, simplified enforcement by reducing outfalls, greater treatment efficiencies and lower management, maintenance and operating costs.

CIBA-GEIGY is currently reexamining its continued participation in the District Project. We have three alternatives:

- Provide WCSD funds for our industrial portion.
- Build our own facility.
- Close the Glens Falls Plant and transfer production to other facilities with available production capacity.

If CIBA-GEIGY is forced to relocate from Glens Falls, 700 employees will be thrown into a job market where there are little or no job opportunities.

It should be noted that among the reasons CIBA-GEIGY acquired the Hercules Pigments Division was that the Glens Falls site provided a viable manufacturing site for its pigment products because of the existing on-site pretreatment facility and the understanding that the site would tie-in to a regional system for secondary treatment.

In summary, at the urging of federal, state and local authorities, first Hercules and later CIBA-GEIGY have been planning for several years to meet EPA Clean Water Standards by joining in the County Project. By changing the rules of the game at this late stage in the progress of this project, the Congress has put the CIBA-GEIGY Glens Falls facility into an operational crisis greater than anything we have faced in the competitive marketplace.

We therefore urge that the Congress reconsider Section 3 of Public Law 96-483 and either drop the amendment or make appropriate changes that would allow for situations such as CIBA-GEIGY's and the Warren County District Number 1 Project that have been delayed through no fault of the grantee or the industrial participant.

Nestlē Enterprises, Inc.
100 Bloomingdale Road White Plains, New York 10605 (914) 682-6000

To Call Writer Direct
(914) 682- 6709

December 31, 1980

Industrial Users Study
Municipal Construction Division
(WH-547)
Room 1217A
401 M Street, SW
Washington, D.C. 20460

Re: Stafford Amendment:
Grants for Construction of Treatment Plants,
Exclusion of Major Industrial Users

Gentlemen:

Pursuant to your request for comments on the above referenced subject, we respectfully submit for your consideration a description of the implications and impacts of the Stafford amendment on the Nestlé Co., Inc.

Up to the time that the Industrial Cost Recovery (ICR) provisions of the Clean Water Act were repealed on October 1, 1980, the Nestlé Co. was prepared at a number of its manufacturing plants to assume its fair share of the capital and operating costs of new POTW upgradings and/or expansions. Although we were not in total agreement with the ICR amendment, we did concur with the Agency that our fair share of the construction and operation costs of the POTW would be forthcoming in situations where total self-treatment was not cost-effective. The provisions of ICR which would allow a long-term period (~30 years) of repayment by industry at low interest rates increased the palatability of ICR.

However, the ICR amendment has since been repealed with the Stafford amendment as its replacement to take effect on November 15, 1981. The Stafford amendment, will require the Nestlé Co., Inc. to secure their own funding to participate in at least two municipal treatment plants. In both cases, the City of Fulton, N.Y. and Marysville, Ohio, are likely not to receive approval on their Step III Construction grant from U.S. EPA by November 15, 1981, and as such the impacts of the Stafford amendment will be felt in both cases. If we elect to participate in joint treatment with the municipalities, significant additional cost to Nestlé will result since upfront capital monies at prevailing borrowing rates will have to be provided directly to the municipalities.

Our review of the economic impacts at Fulton & Marysville caused by the Stafford amendment is similar in many respects and as such we have limited our comments here to the Marysville plant although similar economic problems would pertain to Fulton. With respect to Marysville, the City through its engineering consultant (Burgess & Niple of Columbus, Ohio) is proceeding along a course of action which will require a total capital investment of $7.94 million to expand the secondary portion and add tertiary treatment to its treatment plant. The total investment required for Nestlé to participate in the POTW expansion could be as high as $1.12 million if the Step III grant is not awarded prior to November 15, 1981. However, if the grant is awarded prior to that date and we choose to participate the required capital investment for us becomes $0.297 million. This is where the problem lies. The amount of capital investment required for Nestlé to participate in the POTW varies greatly for the same level of treatment and is determined by factors outside our control. To put the former capital investment in its proper perspective, consider that this size investment made with money borrowed at prevailing rates, would seriously jeopardize the continued Nestlé operation in Marysville.

In situations where significant economic impact would result through participation in POTW treatment, such as described above, we would in all likelihood elect not to participate in the treatment plant leaving an under-utilized POTW.

It is our opinion that the Stafford amendment will turn many industries away from POTW's unless provisions are made to make joint treatment cost competitive with self-treatment.

Thank you.

Very truly yours,

Philip A. Haderer

Philip A. Haderer, P.E.
Senior Environmental Engineer

PAH:lal

Nestlē Enterprises, Inc.
100 Bloomingdale Road White Plains New York 10605 (914) 682-[illegible]

To Call Writer Direct
(914) 682-6709

January 26,1981

Industrial Users Study
Municipal Construction Division (WH-547)
Room 1217A
401 M Street, SW
Washington, D.C. 20460

Attn: Mr. Thomas Whalen

Re: Stafford Amendment:
Grants for Construction of Treatment Plants,
Exclusion of Major Industrial Users

Dear Mr. Whalen:

As requested, we are submitting additional economic data on the effects of the Stafford Amendment on the Nestle plant in Fulton, N.Y.

Based on a Step III project cost of $7.91 million (ENR index of 3100) for the Fulton POTW, the capital cost allocated to Nestle is $0.719 million. Expressed another way, if the Step III grant is not awarded before November 15,1981, Nestle's share of the total project cost will be about 9.1% of the total project cost. The requested capital investment for Nestle to participate in the expanded Fulton, N.Y. POTW does not take into consideration that we are presently "in" the system and receiving reasonably good treatment of our waste now. The Nestle Co. is being treated as a new customer and this is reflected in the magnitude of the capital investment. Securing these funds through the currently high interest bond market would severely affect the overall economic outlook of the Nestle plant.

If Step II can be completed and Step III awarded prior to the November 15,1981 date, then the capital investment required for Nestle to participate would be significantly reduced as the U.S. EPA would assume the full 75% of the total project cost. This brings up another problem faced by Nestle with the Stafford Amendment. The amount of capital investment required for Nestle participate in the POTW varies greatly for the same level of treatment and is determined by factors (U.S. EPA, NYSDEC, City of Fulton and their engineering consultant) outside our control.

Stafford Amendment:
Grants for construction of Treatment Plants,
Exclusion of Major Industrial Users

We are making every attempt to have this project Step III grant awarded before November 15, 1981 but we have not real assurances that this will actually happen. The implications of Stafford are clearly unfair to the Nestle operation in Fulton particularly if the dealine is not met.

Thank you for your consideration of the above.

Very truly yours,

Philip Haderer

Philip Haderer
Senior Environmental Engineer, P.E.

PAH:ro

SMUCKER'S

December 29, 1980

Industrial Users Study
Municipal Construction Division (WH-547)
Room 1217A
401 M Street S. W.
Washington, D. C. 20460

Gentlemen:

Re: Public Law 96-483
to the Federal Water
Pollution Act

Our management in Orrville and I are greatly concerned about the amendment, Public Law 96-483 to the Federal Water Pollution Control Act, known as the Stafford Amendment, that would make any industry with flows exceeding 50,000 gallons per day ineligible for clear water grants.

We believe the removal of the Industrial Cost Recovery provisions was advantageous. As amended, the Pollution Control Act with the Stafford Amendment would defeat the objectives of the Federal Water Pollution Control Act by halting the work that has been started to improve waste treatment and better the environment.

The cost impact on our Orrville Plant alone would be in excess of $1,000,000. The fact that income tax incentives exist if the funds are used by Smucker's as capital expenditures for pollution abatement, but not for sewer payments to the city, appears unjust. This seems to be the situation at our Orrville facility (increased sewer payments).

In addition, industries in communities where Step 2 grants were approved prior to March 15, 1980 or implementation of Step 3 grants occur before November 15, 1981, will benefit from interest free federal grants. This may afford some companies unfair profit advantages as a result of their respective locations and/or the timing of Facility Plan approvals.

THE J. M. SMUCKER COMPANY · STRAWBERRY LANE, ORRVILLE, OHIO 44667 · TELEPHONE (216) 682-0015

I am also concerned about the potential effect of the Stafford Amendment on all of our plants throughout the country. Therefore, I am requesting that you bring to bear whatever authority you can to have the Stafford Amendment, or any similar provision, removed from the amended Federal Pollution Control Act.

Very sincerely,

THE J. M. SMUCKER COMPANY

Paul Smucker

Paul Smucker
Chairman/President

PS/nh

January 30, 1981

COMMENTS OF MILLER BREWING COMPANY ON SECTION 3 OF PUBLIC LAW 96-483

Miller Brewing Company, Milwaukee, Wisconsin ("Miller"),appreciates the opportunity to submit these comments to the Environmental Protection Agency with respect to the potential impact of Section 3 of Public Law 96-483 (the "Stafford Amendment"), as solicited by EPA on December 1, 1980 (45 Fed. Reg. 79573). We understand that EPA intends to use such comments in preparing a report to Congress, as required by Section 4 of Public Law 96-483, on the likely effects of the Stafford Amendment.

Miller owns and operates brewing and container-manufacturing facilities in Wisconsin, California, Texas, New York, North Carolina, and Georgia. Our company strongly supported repeal of the Industrial Cost Recovery provisions of the Federal Water Pollution Control Act (as amended by the Clean Water Act of 1977), believing that Congress' purposes in setting up the Industrial Cost Recovery provisions were not being achieved. Unfortunately, the Stafford Amendment appears worse than the provisions it replaced.

The Stafford Amendment prohibits use of federal construction money to treat industrial discharges in excess of a flow equivalent of 50,000 gallons per day. Miller believes that the Stafford Amendment is an unsound piece of legislation for several reasons:

1. The Stafford Amendment will discourage joint industrial/municipal sewage treatment. Since Miller believes that joint-treatment facilities can often achieve greater pollutant reduction than single industry plant treatment, the new law will have a deleterious effect on the environment. It will also work against the Congressional goal of controlling the number of waste treatment facilities.

2. The 50,000 gallon per day cut-off under the Amendment is a discriminatory cut-off with no rational basis; federal funds will continue to be available for small industries, "dry" industries, and residential users, but not for "wet" industries, such as Miller, or for other industries with a waste flow in excess of 50,000 gallons per day.

3. The Stafford Amendment is not necessary to achieve parity between industries using publicly-owned treatment works and those using self-treatment facilities; various tax credits and write-offs already achieve this result.

Although most of Miller's recently-constructed facilities have their own waste-water treatment plants, the impact of the Stafford Amendment on Miller's Milwaukee brewery, which does not self-treat, will be serious and far-reaching. Preliminary appraisals received by Miller from outside sources show that the Stafford Amendment could cost Miller as much as $17 million, spread over a five-year period. Miller is currently verifying these figures and is now analyzing the economic impact of the Stafford Amendment on its Milwaukee plant. It will supply these statistics to EPA when they become available.

The Milwaukee brewery is the oldest of Miller's plants. It already has the highest production costs of any Miller facility. The maintenance costs of this facility are substantial and are expected to run into the millions of dollars in the coming years. Moreover, the City of Milwaukee is currently under a court order to undertake substantial rehabilitation of its entire sewage system. Miller, as a "wet" industry and one of the larger users of the system, has been monitoring the cost to the company of Milwaukee's implementation of the court order. The court order will clearly result in additional costs to Miller. These costs, however, will be increased dramatically by the Stafford Amendment, which would withhold federal assistance for treatment capacity for facilities the size of Miller's.

Currently, Miller is reappraising the viability of maintaining current levels of production at its Milwaukee brewery. The enormous potential costs of the Stafford Amendment will be carefully analyzed in this regard. An alteration in Miller's current levels of production could adversely affect the work force at Miller's Milwaukee brewery, which currently employs 2,500 workers.

Although Miller's calculations of the likely costs of the Stafford Amendment are at best preliminary, Miller can safely say at this time that the impact of this legislation, on what is already the oldest and least efficient of Miller's facilities, could well be extremely adverse. For this reason, Miller strongly urges that EPA recommend to the Congress that the Stafford Amendment be repealed.

APPENDIX B

Selected responses from interested parties to a notice published in the Federal Register.

Through a notice in the Federal Register on December 1, 1980, the Environmental Protection Agency requested comments from municipalities, industries, and other interested parties regarding the potential effect of the industrial cost exclusion. Contained in this Appendix are a copy of the Federal Register notice, a list of those who provided comments, and copies of some of the comments that we received.

A total of one-hundred and twenty-one comments were received. Of the comments received, sixty-one were from public entities, forty-seven from entities representing the interest of those affected by the industrial cost exclusion in the private sector and thirteen professional engineering firms that plan and design wastewater treatment works that are Federally financed.

Most of the comments that we received criticize or seek clarification of perceived ambiguities in the industrial cost exclusion, rather than offer substantive data on the economic effect. The eight letters that contain data regarding industrial participation in publicly owned treatment works are contained in Appendix A. Any data received from public entities have been incorporated into the National Effect section.

Twenty-seven letters were selected for inclusion in Appendix B to represent the range of opinions regarding the effect of the industrial cost exclusion. All but six of the comments received were against the implementation of the industrial cost exclusion. The unanimous opinion expressed in the majority of the letters is that the industrial cost exclusion may result in increased construction costs because of a perceived need to re-negotiate with participating industries and then replan and redesign the wastewater treatment facility. Four public entities wrote in favor of restoring the industrial cost recovery requirements, one industry supports the industrial cost exclusion, and one trade association is divided on the issue.

federal register

[WH-FRL 1685-5]

Grants for Construction of Treatment Works, Exclusion of Major Industrial Users; Impact Analysis

November 24, 1980.

AGENCY: Environmental Protection Agency.

ACTION: Request for Comments.

SUMMARY: We are requesting comments from municipalities, industries and other interested parties regarding the potential effect of a recent amendment, Pub. L. 96-483, to the Federal Water Pollution Control Act. Section 3 of that amendment provides that grant assistance shall not be used after November 15, 1981, for the construction of any portion of a publicly owned wastewater treatment works designed to serve a major industrial user. Your comments will be considered during the conduct of our study of the effect of that provision. In accordance with section 4 of the new Law, we intend to report our findings, both qualitative and quantitative, to the Congress before March 15, 1981.

DATES: Comments must be submitted before December 31, 1980.

ADDRESS: Send comments to: Industrial Users Study, Municipal Construction Division (WH-547), Room 1217A, 401 M Street, S.W., Washington, D.C., 20460

FOR FURTHER INFORMATION CONTACT: Thomas A. Whalen, (202) 426-8902.

SUPPLEMENTARY INFORMATION: Public Law 96-483 is an Act to extend certain authorizations in the Clean Water Act and for other purposes. One of those purposes was to repeal the industrial cost recovery, the so-called ICR, requirement that was originally enacted as part of the 1972 Act. The original ICR requirement, on which a moratorium had been imposed in 1977, required that each municipality recover without interest, that portion of the Federal grant used to construct the industrial portion of a publicly owned treatment works.

However, section 3 of the new Law states:

> No grant made after November 15, 1981, for a publicly owned treatment works, other than for facility planning and the preparation of construction plans and specifications, shall be used to treat, store, or convey the flow of any industrial user into such treatment works in excess of a flow per day equivalent to fifty thousand gallons per day of sanitary waste. This subsection shall not apply to any project proposed by a grantee which is carrying out an approved project to prepare construction plans and specifications for a facility to treat wastewater, which received its grant approval before May 15, 1980.

We are requesting your comments as input to the study and report that is required by section 4 of Pub. L. 96-483:

> The Administrator of the Environmental Protection Agency shall study and report to the Congress not later than March 15, 1981, on the effect of the amendment made by section 3 on the construction of publicly owned treatment works, industrial participation in publicly owned treatment works, treatment of industrial discharges, and the appropriate degree of Federal and non-Federal participation in the funding of publicly owned treatment works.

Depending upon the nature of your comments and other sources of information, the report to Congress may also identify specific communities and projects affected by the amendment, especially those areas that are rural, have high unemployment or are economically distressed. In addition, we intend to develop information on the amounts and capital costs impacts of industrial flows both above and below the 50,000 gallon per day cut-off that are proposed for treatment in municipal plants. Therefore, your cooperation is critical to this effort and your comments will be appreciated.

Henry L. Longest II,

Deputy Assistant Administrator for Water Program Operations (WH-546).

[FR Doc. 80-37280 Filed 11-28-80; 8:45 am]

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LIST OF COMMENTORS

PUBLIC SECTOR

The entities listed below, representing the interest of those affected by the industrial cost exclusion in the public sector, provided comments in response to the Federal Register notice. Those letters selected for inclusion in this Appendix are noted (*).

Association of Metropolitan Sewage Agencies
*National Association of Counties
*National League of Cities
Alabama-Tombigbee Regional Commission, Alabama
Sumter County Commission, Alabama
Washington County Commission, Alabama
City of Fayetteville, Arkansas
*County Sanitation Districts of Los Angeles County, California
City and County of San Francisco, California
Denver Regional Council of Governments, Colorado
Metropolitan Denver Sewage Disposal District No.1, Colorado
City of Montrose, Colorado
Town of Suffield, Connecticut
Orange County, Florida
Atlanta Regional Commission, Georgia
Cobb County, Georgia
*City of LaGrange, Georgia
Sanitary District of Decatur, Illinois
*City of Kankakee, Illinois
City of Olathe, Kansas
City of Salisbury, Maryland
*Detroit, Michigan
Rochester, Michigan
City of Worthington, Minnesota
City of Laurel, Mississippi
City of Joplin, Missouri
City of Omaha, Nebraska
The Camden County Municipal Utilities Authority, New Jersey
New York State Department of Environmental Conservation
City of Gloversville, New York
County of Nassau, New York
City of New York, New York
*City of Plattsburgh, New York

PUBLIC SECTOR (continued)

*The Governor of the State of North Carolina
City of Charlotte, North Carolina
*City of Goldsboro, North Carolina
*Greenville Utilities Commission, North Carolina
City of Lumberton, North Carolina
City of Morganton, North Carolina
City of Mount Airy, North Carolina
City of Rocky Mount, North Carolina
Metropolitan Sewer District of Greater Cincinnati, Ohio
City of Defiance, Ohio
Village of Delta, Ohio
City of Lima, Ohio
Village of Montpelier, Ohio
Metropolitan Sewer District, Stark County, Ohio
Summit County Sanitary Engineers, Ohio
City of Sidney, Ohio
*City of Sylvania, Ohio
City of Wooster, Ohio
City of Philadelphia, Pennsylvania
Town of West Warwick, Rhode Island
City of Lancaster, South Carolina
City of Lewisburg, Tennessee
Town of Livingston, Tennessee
Town of Rogersville, Tennessee
*City of Houston, Texas
County of Henrico, Virginia
City of Everett, Washington
Milwaukee Metropolitan Sewerage District

PRIVATE SECTOR

The entities listed below, representing the interest of those affected by the industrial cost exclusion in the private sector, provided comments in response to the Federal Register notice. Those letters selected for inclusion in this Appendix are noted (*).

*American Frozen Food Institute
American Meat Institute
*Chamber of Commerce of the United States
*Chemical Manufacturers Association
*Fibre Box Association
*National Association of Manufacturers
*National Food Processors Association
*Tanners' Council of America, Inc.
*Textile Rental Services Association of America

PRIVATE SECTOR (continued)

*United States Brewers Association, Inc.
Milk Industry Foundation • International Association of Ice Cream Mfrs.
*Hewlett-Packard, Palo Alto, California
General American Transportation Corporation, Chicago, Illinois
Masonite Corporation, Chicago, Illinois
*DeSoto, Des Plaines, Illinois
Kraft Inc., Glenview, Illinois
Deere & Company, Moline, Illinois
Inland Steel Company, East Chicago, Indiana
Railoc of Indiana, Inc., East Chicago, Indiana
Anheuser-Busch Companies, St. Louis, Missouri
Ralston Purina Company, St. Louis, Missouri
Muskegon Industrial Users Committee, Muskegon, Michigan
Geo. A. Hormel & Co., Austin, Minnesota
Chamber of Commerce, Worthington, Minnesota
Tanners Association of Fulton County, Inc., Gloversville, New York
F. Rulison & Sons, Inc., Johnstown, New York
CIBA-GEIGY Corporation, Glens Falls, New York
Eastman Kodak Company, Rochester, New York
Rochester Gas and Electric Corporation, Rochester, New York
Nestle Enterprises, Inc., White Plains, New York
Carolina Yarn Processors, Tryon, North Carolina
The Goodyear Tire & Rubber Company Akron, Ohio
*The Procter & Gamble Company, Cincinnati, Ohio
*Mead Corporation, Dayton, Ohio
ARPS Jersey Farm, Defiance, Ohio
Dinner Bell Foods, Inc., Defiance, Ohio
Zeller, Defiance, Ohio
The J.M. Smucker Company, Orville, Ohio
Copeland Corporation, Sidney, Ohio
Scott Paper Company, Philadelphia, Pennsylvania
Jones & Lavgalin Steel Corporation, Pittsburgh, Pennsylvania
Lancaster County Chamber of Commerce, Lancaster, South Carolina
Diamond Shamrock Corporation, Dallas, Texas
Frito-Lay, Inc., Dallas, Texas
Anderson-Clayton, Houston, Texas
Appleton Paper Inc., Appleton, Wisconson
Grede Foundries, Inc., Milwaukee, Wisconsin
Miller Brewing Company, Milwaukee, Wisconsin
Badger Paper Mills, Inc. Peshtigo, Wisconsin

OTHER INTERESTED PARTIES

The parties listed below, although not directly affected by the industrial cost exclusion, provided comments in response to the Federal Register notice. Those letters selected for inclusion in this appendix are noted (*).

Lloyd R. Robinson, Professional Engineer, Birmingham, Alabama
Crawford, Murphy & Tilly, Inc., Consulting Engineers, Lincoln, Illinois
Jones & Henry Engineers, Limited, Toledo, Ohio.
*Camp Dresser & McKee Inc., Engineers, Boston, Massachusetts
Morrison-Maierle, Inc., Consulting Engineers, Helena, Montana
Allgeier, Martin & Associates, Inc. Consulting Engineers, Joplin, Missouri
Stearns & Wheler, Civil and Sanitary Engineers, Cayenovia, New York
Jan A. Kem, Professional Engineer, Newark, New York
Harry Hendon and Associates, Inc., Engineers, Asheville, North Carolina
*CH2M-Hill, Engineers, Portland, Oregon
Gerald C. Allender, Professional Engineer, Erie, Pennsylvania
J.R. Wanford & Company, Consulting Engineer, Nashville, Tennessee
Davy Engineering Co., LaCrosse, Wisconsin

NACo

National Association of Counties

Offices • 1735 New York Avenue N.W., Washington, D.C. 20006 • Telephone 202/783-5113

January 26, 1981

Thomas A. Whalen
Industrial Users Study
Municipal Construction Division
WH 547
Environmental Protection Agency
Room 1217 A
401 M Street, S. W.
Washington, D. C. 20460

Dear Mr. Whalen:

The National Association of Counties (NACo) has adopted a policy regarding the now-defunct industrial cost recovery requirements (ICR): NACo opposes the imposition of ICR as an across-the-board mandate.

In arriving at this position, NACo's Environment and Energy Steering Committee, which is composed of county elected officials from around the country, considered several larger financial questions and their impact on both Federal and local fiscal resources. Some of these issues relate to the problem of the probable impact of the Stafford Amendment which precludes financing of industrial participation in the construction of publicly owned treatment works through the Section 201 program.

First, the major challenge facing the country with respect to the wastewater treatment facilities construction program is one of achieving the greatest improvement in water quality given limited financial resources. Therefore, it is appropriate for consideration to be given to the most efficient and effective ways to spend these monies. However, the ultimate decision about the need for a particular facility is best made through the cooperative state/local water quality management planning process. In point of face, many of the failures of the present system may be attributed to Federal mandates, either Congressionally or Administratively devised, which make it difficult to get the real job done.

Second, it is well understood that the Federal government must assure itself that, in the future, local governments will be able to operate, maintain, and replace those wastewater treatment facilities which are being constructed with Federal support to meet state water quality standards. Therefore, NACo's Steering Committee has discussed the industrial cost recovery requirements as a component of a local financial management plan. For example, if a local government can successfully document to EPA that it has a financial management plan fully covering all aspects of capital accumulation, debt retirement, and operations and maintenance costs without using industrial cost recovery charges, the local government should not be required to collect the funds. By the same token, where the necessary financial wherewithall appears lacking, ICR would seem to be an appropriate remedy.

The Stafford amendment would appear to raise complex problems for water quality managers:

- It will probably result in a proliferation of smaller privately owned facilities at a time when most states find themselves unable to adequately monitor and ensure the performance of existing plants.
- More private construction means more borrowing by the private sector and in many rural areas this borrowing could potentially compete with local governments.
- Complex issues over the control of wastewater treatment capacity paid for by private industry could harm the ability of local governments to manage their resources in an efficient manner. For example, what if a private industry paid for twenty percent of the treatment capacity in a newly constructed facility, but then determined that it would not require the use of the added capacity until some time in the future? It seems unlikely that the capacity could be allocated to other private users by the local government which, in the mean time, would be paying the operating and maintenance charges on a system-wide basis which would not be assigned to the industrial customer.

We hope that your Agency's study will identify the relative magnitude of the industrial subsidy which seems to have prompted so much concern. Perhaps it is smaller than commonly thought. However, at bottom, the National Association of Counties would probably endorse a reduced Federal share of wastewater construction grants before it would concur with the intent of the Stafford amendment. The critical issue remains one of allowing that level of government closest to the problem to retain the authority, as well as the responsibility, for the most effective means of solving the problem.

Sincerely,

Larry Naake

Larry Naake
Associate Director

National
League
of
Cities

1620 Eve Street, N.W.
Washington, D.C.
20006
(202) 293-7310
Cable: NLCITIES

OFFICERS:
President
Jessie M. Rattley
Councilwoman, Newport News, Virginia
First Vice President
William H. Hudnut, III
Mayor, Indianapolis, Indiana
Second Vice President
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Immediate Past President
John P. Rousakis
Mayor, Savannah, Georgia
Executive Director
Alan Beals

December 23, 1980

Industrial Users Study
Municipal Construction Division (WH-547)
U. S. Environmental Protection Agency
401 M Street, S.W. - Room 1217A
Washington, D.C. 20460

The National League of Cities appreciates the opportunity to comment on Section 3 of Public Law 96-483, which provides that after November 15, 1981 no grant assistance shall be used for the construction of any portion of a publicly-owned wastewater treatment works designed to serve a major industrial user.

Over the past several years, cities have commented often to EPA about the inequitable and administratively burdensome nature of the industrial cost recovery provisions of the Clean Water Act. The current proposal to totally eliminate grant assistance to publicly-owned treatment works for construction costs associated with major industrial users, however, will produce even more serious problems for municipal governments. Under the current Section 3 amendment, the cure is worse than the disease for several reasons.

First, cities today are operating within very tight budgetary and resource base constraints. Local governments will find it difficult, if not impossible, to absorb additional costs resulting from decreased grant assistance. Second, the Section 3 amendment will have particularly negative consequences on the budgets and economic development and revitalization efforts of small communities. Small cities already are experiencing difficulties in raising the local share of 201 construction costs, and will be seriously affected by reductions in funding assistance. Moreover, since most large urban areas are into Step 2 and are thus grandfathered in by the provisions of Section 3, it will be nation's smaller communities which will be principally hampered in their efforts to attract industry and integrate their water clean-up and economic growth plans.

PAST PRESIDENTS: Tom Bradley, Mayor, Los Angeles, California • Henry W. Maier, Mayor, Milwaukee, Wisconsin • Tom Moody, Mayor, Columbus, Ohio • DIRECTORS: [illegible] California • Ted Wilson, Mayor, Salt Lake City, Utah

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Finally, irrespective of the administrative mechanisms which EPA uses to implement Section 3, the amendment will result in inequitable treatment between and among classes of users. In addition to the differing treatment given to old vs new systems, and large vs smaller systems, the amendment can create disparate treatment of systems within the borders of a single community. From a local government perspective, it is both unfair and harmful to local planning and growth management efforts to grandfather in a treatment plant in an older industrialized section of the city and not provide the same assistance to a newer area which has been identified by the local government as an economic development target district.

Because of the potential hardships and inequitable treatment imposed on municipalities by the elimination of assistance to that portion of a POTW designed to serve major industrial users, the National League of Cities opposes the Section 3 provision, and will advocate its repeal in the next session of Congress. Failing repeal, we believe that modifications to the provision should be made which will satisfy the needs of industrial users and municipalities which provide wastewater treatment services, lessen the inequitable treatment among users and reduce the paperwork burdens associated with the previous ICR program. NLC is willing to assist EPA in structuring this modified program.

Enclosed for your information is a resolution on the Section 3 amendment which was adopted by the NLC membership at its annual business meeting on December 3, 1980 in Atlanta, Georgia. We appreciate the opportunity to comment on this important issue.

Sincerely,

Alan Beals

Alan Beals
Executive Director

Enclosure

Adopted!

PROPOSED RESOLUTION - RC #15

ON THE STAFFORD AMENDMENT TO THE CLEAN WATER ACT

WHEREAS, many cities have consistently advocated the elimination of industrial cost recovery (ICR) provisions from the Clean Water Act because carrying out an ICR program contributes nothing to water pollution control and simply diverts time and effort away from that end; and

WHEREAS, in advocating the elimination of industrial cost recovery requirements from the Clean Water Act, these cities are in full support of the first recommendation in the Coopers & Lybrand feasibility study presented to EPA in December 1978; and

WHEREAS, Congress decided to reexamine the need for ICR programs when it modified PL   to include an ICR feasibility study and a moratorium on the collection of ICR revenues by those treatment authorities that had already put a recovery program into operation. The study has been completed and submitted to Congress for consideration. Its primary conclusion is that ICR has met the objectives for which it was created; and

WHEREAS, on October 1, 1980, the Congress repealed the Industrial Cost Recovery Act provision from the Clean Water Act and replaced it with the Stafford Amendment; and

WHEREAS, the Stafford Amendment will affect municipalities more adversely than the ICR by requiring cities to absorb all costs for processing industrial wastes in excess of 50,000 gallons per day;

NOW, THEREFORE, BE IT RESOLVED that the National League of Cities goes on record to repeal the Stafford Amendment of the Clean Water Act of 1977, as amended.

Submitted by: Resolutions Committee

Date Received: December 1, 1980

Approved: December 3, 1980
Annual Congress of Cities
Atlanta, Georgia

WASTEWATER RECLAMATION
SOLID WASTE MANAGEMENT

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road / Whittier, California
Mailing Address: / P. O. Box 4998, Whittier, California 90607
Telephone: (213) 699-7411 / From Los Angeles (213) 685-5217

WALTER E. GARRISON
Chief Engineer and General Manager

December 29, 1980

Industrial Users Study
Municipal Construction Division (WH-547)
Room 1217A
401 M St. S.W.
Washington, D. C. 20460

Attention: Thomas A. Whalen

Gentlemen:

The Federal Register of December 1, 1980 requested comments on the potential effect of Section 3 (the Stafford Amendment) of Public Law 96-483. The Sanitation Districts believe that the Stafford Amendment will have a much more profound adverse impact on municipal agencies than the ICR program that it replaces. This impact will be felt by local agencies in both the area of administration and financing.

A major reason for the repeal of ICR by Congress was the wide-spread conviction that administration of the ICR program by municipal agencies would be more costly than the corresponding revenue derived from its enforcement. While, on the surface, the Stafford Amendment would appear simple to administer, a more thorough examination indicates that its implementation could be more complex than ICR and have the added disadvantage of not generating any revenue to offset the administration cost. This is especially true for large sanitation agencies such as the Districts which have a complex system of sewers and treatment facilities and accept the wastes from over 8000 industries. Among the specific administrative problems envisioned by the Districts are the following:

1. When a system is expanded or upgraded, existing industries would have to pay the total industrial portion of the facilities under the Stafford Amendment. However, sound engineering practices dictate that all facilities be designed to handle future flow. Therefore, a system must be devised to enable new industries to reimburse existing industries for their capacity in the system. With 8000 industries on the system, this would present significant administrative problems. In like manner, when an expansion to a facilitiy is designed, the future flow from residential or industrial contributors is never completely defined. Under these circumstances, it would be difficult to determine what portion of a POTW is not eligible for grant funds.

2. A question of ownership rights of industrial companies to sewerage capacity may exist under the Stafford Amendment. As each company will be charged to finance construction of facilities according to its waste characteristics, a closure of the company (or a significant increase or decrease in wastewater flows) could create an administrative problem as to what sewerage capacity rights

are vested in a company. Would a company be able to transfer or sell its capacity rights to other companies? A continuing complex and costly administrative problem could be created.

3. Using an arbitrary 50,000 gpd criteria to determine the requirement for grant funding of industrial capacity will result in a significant inequity between those companies slightly below and those slightly above the flow criteria. Clearly, this will present a problem in accurately assessing flow for each industry since the tendency for a given industry to represent their flow as less than 50,000 gpd will be great. In addition, it is not clear how to deal with a situation where an industry's flow is less than 50,000 gpd at the time a POTW facility is built and then has an increase in flow to greater than 50,000 gpd. As a corollary to this problem, there are industries who, because of the nature of their operation, discharge less than 50,000 gpd on some days and more than 50,000 gpd on other days. In a large system, it would be extremely costly to monitor all industries impacted by this condition to determine whether or not they fall under the Stafford Amendment.

From the financial aspect, the Stafford Amendment appears to be more disadvantageous to sewerage agencies than the ICR program that it replaces. While both programs were aimed at insuring that industry does not benefit from the construction grant program, ICR provided a setting in which industry could pay their obligation over a 30-year period, whereas the Stafford Amendment requires industry to pay their obligation prior to the initiation of construction of new facilities (unless the taxpayers are willing to subsidize industry -- an unlikely situation in post-Proposition 13 California). Because of this major change in direction by Congress, and the imminent implementation of the Stafford Amendment, many municipal construction projects may be delayed for several years until municipalities implement ordinances, policies, etc. to enable large sums of money to be collected from industry. For other agencies, such as the Sanitation Districts, which do have the authority to collect money from industry, the impact will still be profound.

For example, the Districts' construction program for fiscal years 1981-82 and 1982-83 calls for construction of facilities that are estimated to cost $112 million. Prior to the Stafford Amendment, the Districts would have received 75 percent of these funds ($84 million) from the EPA. Using the best available assumptions, it appears that industry represents approximately 18 percent of the Districts' system, and therefore, under the Stafford Amendment, an additional $15 million would have to be collected from industry during that two-year period for their non-grant eligible share of capital projects. To put this number in perspective, the expected income from the Districts' industrial waste surcharge program (which represents industry's share of both net capital and O&M costs of the Districts' system) for the same two-year period is approximately $20 million. Therefore, the short-term impact of the Stafford Amendment on the industries within the Districts' system would be an approximate doubling of their cost. For some industries, especially those with high suspended solids discharges, the impact would be even more severe since the bulk of the planned construction is aimed at sludge removal. Table 1 illustrates the impact of the Stafford Amendment on several of the larger industrial dischargers to the Districts' system.

Based on the above, implementation of the Stafford Amendment should, as a minimum, be delayed beyond November 15, 1981. It is suggested that an implementation period of five years be allowed. Obtaining the required large amounts of money to replace federal grant funds requires planning and orderly implementation. Industrial companies, as well as sewerage agencies, unless very strongly financed, may not be able to develop such funds by November 1981. At the current high rate of interest, an amendment that requires sewerage agencies and/or industrial companies to drastically modify their financial program in such a short time frame in order to finance large construction projects will be difficult to implement. Such a requirement could severely delay or indefinitely postpone the construction of needed sewerage facilities. In this regard, the effects of inflation on the costs of sewerage facility construction should be considered. Postponements in the construction of sewerage facilites which will likely result from the Stafford Amendment will necessarily cause increased overall costs for such construction. For an annual construction cost inflation rate of 15 percent, the 18 percent share of construction costs to be obtained from industry within the Sanitation Districts could be negated with slightly over a one-year delay.

Alternatively, the interpretation of the Stafford Amendment by EPA could be modified. The modified interpretation would provide that, where a sewerage agency has prepared and obtained EPA approval for a facility plan, if any aspect of the plan had been given a Step 2 grant approval by May 15, 1980, then all portions of the facility plan would be eligible for full grant funding without a deduction for industrial capacity. This would appear to be appropriate as existing facility plans have been prepared with the understanding that grant funding of industrial sewerage capacity would be made available.

In summary, implementation of the Stafford Amendment could result in considerably more administrative and financial problems for municipal sewerage agencies than the ICR program that it replaces. The Sanitation Districts, therefore, strongly recommend that EPA's report to Congress summarizing the impacts of the amendment concludes by recommending the elimination of the Stafford Amendment from the Federal Water Pollution Control Act. If you wish additional information from the Districts relative to the matter, please contact this office.

Very truly yours,

Walter E. Garrison

By Robert P. Miele

Robert P. Miele
Department Head
Technical Services Department

RPM:iw
Attachment

Table 1. Comparison of Surcharge Increases for Selected Industrial Companies due to Stafford Amendment

Company	Totals for FY 1981-82 and FY 1982-83 Surcharges	
	w/o Stafford	w/ Stafford
A	$ 834,000	$1,111,000
B	$1,793,000	$5,296,000
C	$ 936,000	$1,442,000
D	$ 139,000	$ 254,000
E	$ 314,000	$ 796,000

Companies A and C are large petroleum refineries.
Company B is a large secondary fiber paper mill.
Company D is a large meat packer.
Company E is a large detergent manufacturer.

[illegible]

City of LaGrange
Office of the City Manager

P. O. Box 430
LaGrange, Georgia 30241
Phone 404 884-7386

December 16, 1980

1980

IC # 547

Industrial Users Survey
Municipal Construction Division
WH-54 - Room 1217A
401 M Street, S. W.
Washington, D. C. 20460

RE: Public Law 96-483 to Federal Water Pollution Control Act

Dear Sir (Madam):

The City of LaGrange is strongly opposed to Public Law 96-483 which prohibits grant assistance for the construction of publicly owned waste water treatment works (P.O.T.W.) to serve industries contributing over 50,000 gallons per day of industrial wastes. The long-range economic consequences to LaGrange are potentially disasterous if this law is not changed.

The City of LaGrange has been dominated by the textile industry for several decades. As the textile industry has become more capital intensive through mechanization, the LaGrange area has suffered high unemployment rates and declining population. The various aspects of urban decay though purely a phenomenon of northern cities are abundant in LaGrange. Keeping our people working is a priority that has dominated our efforts and policies for a long time.

The textile plants of LaGrange have been contributing wastes to City treatment plants for over 30 years. As these plants have modernized with new machinery and the latest technologies, the City has expanded facilities to the present 7.125 MGD capacity in four sewage treatment plants. At present, two of the four facilities treat the effluent of ten industrial plants having discharges in excess of 50,000 gallons of waste water per day. The LaGrange "201 Plan Study" shows that the wastes from these plants can be accommodated in a centralized new facility. In many cases, there is no way that the textile plants can convert to individual treatment because of physical, environmental, and economic considerations.

We also feel somewhat cheated by Public Law 96-483 because completion of our Wastewater Facilities Planning Study was originally scheduled for four and one-half (4½) years ago. The grant was awarded in 1974 and many unreasonable delays in responses from State and Federal agencies, indecisiveness in those agencies, the reversal of several previous decisions about our study and periodic suggestions for further studies of uneconomical alternatives have all caused the Step I study to drag on over six years. We should have completed construction of the facility by now. Inflation and the wasted time has drastically increased the cost of construction.

The result of Public Law 96-483 is that our major industries will either have to construct their own treatment facilities (which is in several cases impossible) or put up front end money for a P.O.T.W. We estimate that this new law would cost LaGrange four to six million dollars. Some of our local industries may be forced to close operations in LaGrange, and unemployment in LaGrange would quickly become unmanageable.

We feel that separation of existing dual treatment facilities developed over several decades of requiring large amounts of capital money will have a devastating effect on LaGrange industry, economic balance, and unemployment rate. We do not oppose close regulation of industrial effluent and prudent selection of future discharges, and users should bear fair share of the cost of treatment, but not in the devastating method now imposed by Section 3 of Public Law 96-483.

Hoping this mistake can be corrected, I am

Yours very truly,

JG Newman

J. G. Newman
Mayor

CITY OF LAGRANGE

JGN:egh

cc: Senator Sam Nunn
Senator Elect Matt Mattingly
Congressman Jack Brinkley

City of
KANKAKEE *Illinois*
CITY HALL • INDIANA AVENUE AND OAK STREET • [illegible]
815-933-0500
TELEPHONE XXXXXXXXXX

TOM RYAN, JR
Mayor

GENE GLENZINSKI
City Clerk

SAM AFRICANO
Treasurer

December 30, 1980

Industrial Users Study
Municipal Construction Division (WH-547)
U.S. Environmental Protection Agency
401 M. Street, S.W. Room 1217A
Washington, D.C. 20460

Subject: Sewage Treatment Construction Grants
Exclusion of Major Industrial Users

Gentlemen:

The purpose of this letter is to express the concern of the City of Kankakee toward the proposed implementation of Section 3 of Public Law 96-483 next year and to request that the U.S. Environmental Protection Agency recommend that Congress repeal same.

As a result of the signing of an Intergovernmental Agreement on October 4, 1979, the Department of Water Pollution Control of the City of Kankakee became responsible for the design, construction and operation of a Regional Wastewater Treatment Facility to serve the City of Kankakee and three surrounding villages. The present population which will be served by the proposed facilities is 67,000 and the 1990 and 2000 projected populations will exceed 75,000 and 83,000 respectively. In addition, the proposed facilities will serve approximately twenty eight (28) existing industries of which eighteen (18) presently discharge in excess of 50,000 gallons per day or may within the twenty year planning period of the project. Thirteen (13) of the major industries and several of the minor ones currently provide pretreatment at their industrial sites.

The Department of Water Pollution Control is currently in early stages of design of major improvements and expansion of the Regional Wastewater Treatment Facility estimated to cost $18,000,000.00. This proposed work will provide primary and secondary treatment for an average dry weather flow of approximately 22 million gallons per day. In addition, two small municipal and two privately owned wastewater treatment plants will eventually be abandoned as a result of the proposed regionalization. Approximately $30,000,000.00 will also be spent on sewer system expansion and rehabilitation within the four communities. All of the above work was recommended in the Step 1 Facilities Plan Report for the Kankakee Planning Area.

City of
KANKAKEE
[illegible]

TOM RYAN, JR.
Mayor

GENE GLENZINSKI
City Clerk

SAM AFRICANO
Treasurer

815-933-0500
XXXXXXXXXX

December 30, 1980

Industrial Users Study
Municipal Construction Division (WH-547)
U.S. Environmental Protection Agency
401 M. Street, S.W. Room 1217A
Washington, D.C. 20460

Subject: Sewage Treatment Construction Grants
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There is no doubt that Section 3 of Public Law 96-483 will, if implemented, dramatically shift the burden of financing the improvements to the taxpayers and industry in the Kankakee metropolitan area. Depending on the interpretation of the final regulations, the professional staff of the Kankakee Department of Water Pollution Control has determined that the maximum grant for construction of the Regional Wastewater Treatment Facility could be reduced from 75% of the total cost or $13,500,000.00 to as little as $7,860,000.00. This would increase the local funds necessary to complete the treatment portion of the project by 225% or $5,640,000.00. A detailed determination of the impact of this law on the sewer system has not been completed; however, substantial additional local funds would also be necessary for most segments of the sewerage improvements.

The rate of unemployment in Kankakee County has exceeded both the national and the Illinois average rates of unemployment continually since 1974. The most recent county unemployment rate, as determined by the Job Services Division of the State of Illinois, was 11.77% for the month of November, 1980. The Economic Development Administration of the U.S. Dept. of Commerce has declared the entire county to be an Economic Redevelopment Area due to its excessive unemployment.

The City of Kankakee believes that implementation of Section 3 of Public Law 96-483 will (1) create undue hardship in the ability of the City to sell the bonds necessary to finance and construct the presently proposed project, (2) place an unreasonable high cost to all users in the system thru the user charge system which must be developed, and (3) place an additional financial strain on the existing local industry. Therefore, the City of Kankakee requests that the U.S. Environmental Protection Agency recommend in its report to Congress that Section 3 of Public Law 96-493 be repealed.

The report to Congress may also identify specific communities and projects which will be affected by the amendment. The City of Kankakee would be happy to cooperate with the U.S. and the Illinois Environmental Protection Agencies in providing additional information regarding the effect of this amendment on our current project.

If you have further questions or require more information, please feel free to contact Mr. James R. Clarno, P.E. of the Kankakee Department of Water Pollution Control at the above address. Thanking you for your time, I am,

Very truly yours,
CITY OF KANKAKEE

Tom J. Ryan, Jr.
Mayor

TJR:rw
cc: Kankakee Area Chamber of Commerce
Illinois Municipal League
National League of Cities
Illinois Environmental Protection Agency
Donohue & Associates, Inc.
Dept. of Water Pollution Control

POSITION PAPER
STAFFORD AMENDMENT

Detroit Water and Sewerage Department (DWSD) has one all inclusive grant project for the purpose of compliance with EPA & MDNR Effluent Limitations. This project is made up of three grants: one Step 1, one Step 2, and one Step 3. All of these three grants are segmented. The Step 1 work was applied for and awarded in 1976, the Step 2 in 1978 & the Step 3 in 1979.

Most regulations are written with the small P.O.T.W.s in mind where the entire process from planning to completion of construction is handled by single, non-segmented grants. Detroit does not fit in with this concept. If EPA agrees with the viewpoint DWSD has only three, segmented grants, then the Stafford Amendment is not applicable to Detroit. A firm decision of interpretation by EPA is required.

If there should be any doubt that this would be applicable to Detroit, DWSD could request a waiver of its applicability to Detroit.

Since 2/3 or more of the plant has had full grant participation, plus the fact the work is compulsory under the Amended Consent Judgement, there should be cause to waive the Stafford Amendment for the remainder of the work at the Plant.

If none of the above are deemed acceptable, then the following are necessary considerations.

1. Only the amount in excess of 50,000 gpd for each user should be impacted by the Amendment. Further the excess should be calculated on an annual average basis.
2. Since Detroit is so severely economically impacted throughout the Automobile Industry, it makes little practical sense to charge Chrysler extra for treatment at the same time they receive Federal financial assistance. Ford appears to be on the verge of a similar situation as are many supporting industries. The Stafford Amendment is not in the best interest of Detroit.

Position Paper
Stafford Amendment (continued)

3. DWSD contends that the Stafford Amendment should impact only the peak design flow. This may appear incongruous with #1 where only the annual average excess is the applicable factor, but this is a large system and the peaks of the flow from each large industry do not coincide with each other and their individual or conglomerate peak flows do not arrive at the plant coincident with its peak flow.
4. Plant capacity should not be reserved for particular user class. By utilizing the criteria in #3 above, using peak design flow, one does not get muddled up in reserve capacity, future growth and the like.
5. It is doubtful that DWSD would encounter a purely domestic or a purely industrial expansion. The approximate proportionate use by "over 50,000 gal/day" dischargers should be the determinant of what portion of the cost should be impacted by the Stafford Amendment. If concurrent with the expansion there are no "over 50,000 gpd" users added, then none of the cost would be affected.

   Here, the question of billing arises. All existing users would either have been "grandfathered" or would have already paid for services.

   The picture changes however, if we had to go to a higher degree of treatment with no capacity expansion. Then all the "over 50,000 gpd" users would have to pay for their shares.

   Another issue not raised concerns the situation where a POTW plant does not expand and a new "over 50,000 gpd" industry is established requesting service (i.e. mid-town GM Cadillac). For discussion purposes assume all the "charter members" have bought into the system. Do we then charge the new user and give the charter members a rebate? Or do you charge the new user and turn the money back in to the Federal Government? Or do you forget the whole thing?

The inappropriate part about the Stafford Amendment is that it appears not to be equitable. Inequitability encouraged defeat of Industrial Cost Recovery.

6. The biggest question that comes to mind regarding this Amendment is what or who are "Industrial Users"? The statutes and the EPA Regulations are vague on this subject. 40 CFR 35.905, "definitions" provides a definition based on quantity or quality but still leaves many questions. Does "Industrial User" include all plants under one ownership as a single entity? This question is paramount when considering a limiting factor such as "50,000 gallons per day". A single plant might not be in excess, but adding two plants together, even though they may be miles apart, would exceed the limit. The EPA internal paper enclosed with AMSA Bulletin TB 80-37 raises this question also (IV.6.), since it makes the remark, "...where and through how many sewer connections a user connects to the system." (emphasis added).

Considering all plants under one corporate structure, such as GM or Ford, as a single "Industrial User" could have a very serious effect on the financing of further work at the Detroit WWTP, considering that many such plants are in our service area.

It would appear from this Amendment that the Federal government has found another way to impose an "Industrial Cost Recovery" system; one in which the Federal government will not have to provide any front monies. Under the ICR, the

POTW would be grant funded including industrial capacity, with a payback from industry, over a period of time, to both the municipality and the Federal government. Under this Amendment, the municipality has to provide its own financing for the industrial capacity and where is this to come from? One way or another it has to come from the industry since to charge for it in the rates to all customers sould be in violation of the EPA regulations.

This Amendment could force industry to look to alternatives. They could:
1. build their own treatment facilities
2. buy capacity in a POTW (provide front monies)
3. further separate their plants (no two in the same POTW area) or
4. not expand or even lessen their capital investment.

Just about any alternative that industry could look at will mean added cost to the consumer.

DWSD would recommend that the word industry be discarded and concentrate on "Industrial User". We would advocate defining an "Industrial User" as being the enterprise which occupies one contiguous piece of property.

Existing enterprises could not do much about their fate, but if the law were to stay in effect it could lead some industries to disperse their plants to stay under the 50,000 gpd discharge limit. That would not necessarily be negative. It could possibly drive up the cost of consumer products a bit more though if the economy of scale were defeated.

From the viewpoint of Rates and Budget, the effect of the

Stafford Amendment will be to require DWSD to raise a larger local share of grant eligible construction costs. Local rates in the future will cover 20% of non-industrial capacity and 100% of industrial capacity. Presumably this added cost burden will fall on industry. It is therefore in DWSD's interest, and industry's, that the industrial proportion of our total burdens be kept as small as possible.

Aside from ASMA, we would advocate that the Mayor and Detroit's U.S. Representative and U.S. Senators from Michigan convene a conference with the largest Detroit dischargers to plan strategy for the overturn of paragraph(k) of the Stafford Amendment. We believe the drive to accomplish such an action will have to come from large POTWs since they are the most heavily hit. We need an amendment to the Stafford Amendment to accomplish this goal.

March 20 1902

Office of the Mayor
City Hall
Plattsburgh, New York
12901

John L. Ianelli
Mayor

Telephone 563-7701
(Area Code 518)

December 23, 1980

Industrial Users Study
Municipal Construction Division (WH-547)
Room 1217A
401 M. Street S.W.
Washington, D.C.- 20460

Re: Exclusion of Major Industrial Users
from Construction Grants for Wastewater
Treatment

Gentlemen:

In 1967 the City of Plattsburgh, N.Y. and three (3) paper-mills, (Georgia-Pacific Corp., Diamond International Corp. and Imperial Wallpaper Co.) decided to construct a combined Municipal-Industrial Wastewater Treatment Facility. This facility was built and placed in service in November, 1973. Federal and New York State funds were utilized in financing the construction of the facilities. At present approximately sixty-five (65%) percent of the waste load on the treatment plant is from the industrial sources.

The operation of this wastewater treatment plant has effectively cleaned up the waters of Cumberland Bay on Lake Champlain and the lower reaches of the Saranac River. However, some design deficiencies in the original plant design have been established from plant operations. These deficiencies are currently being addressed in a Wastewater Facilities Plans (Step 1, 201 Study) for Plattsburgh and Environs. In addition a Sludge Management Study (Step 1, 201 Study) for Clinton County, New York is currently in progress. This study is principally for disposal of the two hundred (200 c.y.) cubic yards per day of sludge from the Plattsburgh Water Pollution Control Plant. The long range, area-wide waste treatment and disposal strategy for Plattsburgh and surrounding Clinton County is founded on combined municipal and industrial waste treatment. The existing combined treatment facilities make it economically unfeasable for either the municipal or industrial users to operate separate facilities in the future.

Clinton County is located in the northeast corner of New York State. It is principally a rural, forested area with very little basic industry. The Economic Development Administration, U.S. Dept. of Commerce has designated Clinton County as a area of chronic un-employment and under-employment. It is the view of the City of Plattsburgh Administration that the effect of the proposed exclusion of industrial waste from the grant program for construction of waste treatment facilities is termination of effective waste treatment in the Plattsburgh, New York area. Thirteen (13) years of planning and construction have been and are now, based upon combined treatment following the federal guidelines set forth by the E.P.A. and its predecessors. A change in the rules at this time would be counter-productive to the ultimate goal of effective waste treatment and an unreasonable burden for the local economy.

Very truly yours,

John L. Ianelli
Mayor

JLI/mj
cc: Metcalf & Eddy
Cl. Co. Planner
Georgia-Pacific Corp.
Diamond International Corp.
Imperial Paper Co.

STATE OF NORTH CAROLINA
OFFICE OF THE GOVERNOR
RALEIGH 27611

JAMES B. HUNT, JR.
GOVERNOR

December 31, 1980

Industrial Users Study
Municipal Construction Division (WH-547)
U. S. Environmental Protection Agency
401 M Street, S. W. - Room 1217A
Washington, D. C. 20460

The State of North Carolina appreciates the opportunity to comment on Section 3 of Public Law 96-483, which provides that after November 15, 1981 no grant assistance shall be used for the construction of any portion of a publicly-owned wastewater treatment works designed to serve a major industrial user.

North Carolina is unusual among states in that it has an abundance of natural resources coupled with a large population dispersed primarily in small towns. In 1978 half of the population lived in those areas with less than 10,000 people. Traditionally, these small towns and rural areas have not been able to provide employment opportunities for their citizens largely because adequate public services were not available. Encouraging more and better jobs in rural North Carolina as well as in our rapidly growing metropolitan areas continues to be a top priority. We in North Carolina interpret the most recently imposed restrictions on the use of federal construction grant funds for capacity to treat industrial wastewater in publicly-owned wastewater treatment facilities to be a serious threat to our progress.

Throughout North Carolina wet industries form the backbone of the economy and are the source of jobs for large numbers of our citizens. Many of these major industrial users are located in small towns and rural areas which are least likely to absorb costly delays and reductions in grant assistance. Efforts to attract industry which can benefit from the state's water resources while working for water clean-up will be seriously hampered.

In many instances, communities may have already invested substantial funds in planning as well as water and sewer lines and water facilities in anticipation of demand related to growth. In addition to the serious financial problems posed to our smaller communities, two other issues related to Section 3 have emerged. The first is confusion over whether or not EPA will cost share on any portion of the capacity needed to serve major industrial users. To assist one community serving several smaller (less than 50,000gpd) wastewater producers and deny a second community assistance with industrial capacity to serve a single major industrial producer (more than 50,000gpd) is inequitable. Community wastewater treatment facilities should be eligible for federal participation for any industrial user on the first 50,000 gpd if any limit is to be imposed.

The second issue which may arise from the implementation of this section is that industries, both new and existing located in communities with restricted capacity, may choose to build their own on-site waste treatment facilities. All of this will tend to increase the number of point source discharges, thereby increasing the number of permits that must be issued and monitor. Assuming no adverse environmental impact, at a minimum the result is higher administrative overhead without any corresponding water quality benefit.

North Carolina's preference is to support EPA grant eligibility for industrial capacity. In a state experiencing rapid growth, communities need to serve existing industrial dischargers and provide limited capacity for industrial growth. We support the efforts of our municipal officials who have voiced their objections to the amendment at a recent Congress of Cities and expect to work closely with them for the repeal of the Section 3 provisions in favor of a less damaging alternative.

Paul Essex of my office and the staff of the Division of Environmental Management, Department of Natural Resources and Community Development, will be following this issue closely. I encourage you to contact them for any additional information that might be of assistance in preparing the response to Congress.

Sincerely,

James B. Hunt, Jr.
Governor

City of Goldsboro
North Carolina
27530

December 23, 1980

Industrial Users Study
Municipal Construction Division (SH-547)
Room 1217A
401 M Street, S.W.
Washington, D. C. 20460

Gentlemen:

As requested in the Federal Register of December 1, 1980, I am writing to comment on the effect of Section 3 of Public Law 96-483. This section repeals the ICR program and prohibits funding of treatment capacity for major industrial users.

The effect of this section of law is extremely arbitrary and unfair. Some municipal treatment works and contributing industries will obtain full funding of industrial capacity while other municipalities and contributing industries will not. These effects of the law are to be applied completely at random by the use of the arbitrary cut-off date set forth in the law. The City of Goldsboro will not be able to meet the deadline and will thus not be eligible for funding for a significant portion of the required treatment capacity.

Our City has budgeted funds for its share of construction cost very carefully and conscientious over the past few years. The sudden enactment of this law has thrown all our plans into disarray. We are now faced with a significant increase in local cost for which we had no warning and no opportunity to budget. We will have great difficulty financing the necessary capacity because of this situation.

The alternative to municipal financing is to collect the required funds from the contributing industries. This approach could be devastating to the economic health of the Goldsboro area. There is great risk that large, but marginally profitable, employers will be forced out of business by a sudden and unanticipated requirement to pay for treatment capacity.

In summary, we strongly suggest that Federal funding of industrial treatment be reinstated without industrial cost recovery. We would, however, prefer the former ICR program to the difficult situation in which we have been placed by Public Law 96-483.

Thank you very much for your solicitation and consideration of our opinion.

Very truly yours,

Collings

K. L. Collings
City Manager

jed

greenville
utilities
po box 1847 greenville north carolina 27834
telephone 752—7166

December 23, 1980

Industrial Users Study
Municipal Construction Division (SH-547)
Room 1217A
401 M Street, S.W.
Washington, D.C. 20640

Att: Mr. Henry L. Longest, II

RE: Comments On Public Law 96-483, Section 3, Amendment

Dear Sir:

This letter is written in response to your request for comments on the amendment to Public Law 96-483, Section 3, which rescinded the industrial cost recovery (ICR) requirements to the Federal Water Pollution Control Act, and we offer the following for your consideration:

1. By amending the FWPC Act to rescind the ICR requirements, you have shifted a tremendous burden onto the municipalities in this nation who are responsible for treatment of all wastewater generated in their community, including industrial, commercial and residential. This amendment, if left in tact, will increase the City of Greenville's share cost of our project by an additional $1,210,000. Our plant facility project is estimated to cost approximately $9.2 million.

2. The principle of the amendment is wrong. If you intend to penalize industry, then you are doing so at the expense of the communities who are obligated to serve these industries as a part of our total community services. The industrial cost recovery section of the Act may not have been perfect, but wny abolish it to the detriment of the municipalities that must pick up the burden.

3. It seems "incongruous" that the federal government would participate in 75% of the cost of wastewater facilities

for our municipality, but exclude the industrial waste contribution. Our user charges will collect from industry their fair share of treating their particular waste. And the original ICR method, though cumbersome, seems to be a more logical method of funding capital costs.

4. But, if it is Congress' desire to eliminate the ICR, then you should not change the rules "in the bottom of the 8th inning." Greenville, like many other communities, has struggled for years to complete our 201 Sewer Facilities planning process under changing Environmental Protection Agency requirements. We are now close to the threshold of a Step II grant (design phase). With your cut-off date of November 15, 1981 for Step III grants (construction phase), we are simply "left holding the bag." In Greenville's case, we have been working for six (6) years to get the 201 Plan acceptable to EPA. Time and money have been wasted (federal, state and local) trying to accommodate the desires of EPA. Now, in the 11th hour, you completely change the rules, such that all of our financial planning goes down the drain. A brief summary of our efforts to achieve construction of a new wastewater treatment facility is attached.

5. If Congress elects to change the rules, it should extend the cut-off date to November 1983, at the earliest. This would give communities that have received Step I grants (planning phase), and are in the process of planning their waste treatment requirements, time to complete their projects in accordance with their planning concept. Congress should recognize that the planning and development process for sewer treatment facilities under the EPA program is an extremely long and arduous task. It cannot be completed in twelve (12) months, and therefore, any change in the law should recognize this long planning process and give us adequate time to adjust.

In summary, we recommend that the ICR requirements remain as before the amendment, but if the ICR requirements are to be rescinded, then they should not be rescinded for any community which has begun its planning process with a Step I grant, or certainly not earlier than November 1983.

Reproduced from best available copy.

Thank you for considering our situation.

Sincerely,

Charles O'H. Horne, Jr.
Director of Utilities

CO'HHjr/jv
Attachment

CCS: Mr. Wadie Lewis, GUC
Mr. Orman Whichard, Olsen Associates
Mr. Robert Helms, DEM
Hon. Jesse Helms, U.S. Senator
Hon. John East, Senator-Elect
Congr. Walter B. Jones

City of Sylvania
6335 MAPLEWOOD AVENUE
SYLVANIA, OHIO 43560

OFFICE OF THE MAYOR

December 18, 1980

Industrial Users Study
Municipal Construction Division (WH-547)
Room 1217A
401 M Street, S. W.
Washington, D.C. 20460

Re: Amendment, P.L. 96-483
to Federal Water Polution Control Act

Gentlemen:

It was noticed in the December 1, 1980 Federal Register that comments are being solicited regarding the potential effect of a recent amendment to the Federal Water Polution Control Act, and that Section 3 of the amendment provides that grant assistance shall not be used after November 15, 1981 for construction of any portion of a publicly-owned wastewater treatment works designed to serve a major industrial user.

It is our view that this amendment, which eliminates Industrial Cost Recovery of Federal grants for sewage treatment construction, will unduly complicate the grant process and will create serious problems for all grant recipients.

Sincerely,

James E. Seney,
Mayor
RSC/til

We must be able to finance adequate facilities and recover that cost or the whole point of building proper facilities is lost.

City of
HOUSTON
JIM McCONN, MAYOR
HOUSTON, TEXAS 77030

CITY COUNCIL MEMBERS
LARRY McKASKLE
ERNEST McCOWEN, SR.
LANCE LALOR
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JOHNNY GOYEN
HOMER L. FORD
JUDSON ROBINSON, JR.

CITY CONTROLLER
KATHRYN J. WHITMIRE

City of Houston Health Department
1115 North MacGregor Drive

December 24, 1980

Environmental Protection Agency
Industrial Users Study
Municipal Construction Division (WH-547)
401 M Street SW, Room 1217A
Washington, DC 20460

Gentlemen:

The City of Houston Health Department would like to submit comments on the potential effects of the recent amendment to public law 96-483, the Federal Water Pollution Control Act, and specifically Section 3 of that amendment that would prohibit the use of grant assistance after November 15, 1981 for the construction of any portion of a publicly owned wastewater treatment works designed to serve a major industrial user. This is in response to the request for comments published in the Federal Register, Vol. 45, No. 232, Monday, December 1, 1980, p. 79573.

Since 1974, the City of Houston Health and Public Works Departments have carried out the provisions of a city ordinance designed to comply with the Industrial Cost Recovery (ICR) provisions of the Federal Water Pollution Control Act. This ordinance places restrictive limits on the discharge into the city sewer system of heavy metals, toxic materials, oil and grease, or other constituents which would impair the operation of the city sewage treatment plants or create a health hazard in any way. Pretreatment is required if necessary to meet the limits imposed. A surcharge is also levied for wastes containing either BOD or suspended solids or both in excess of the usual concentration of sanitary sewage, in order to provide an appropriate mechanism for cost recovery. Approximately 2,000 industrial waste permits have been issued or are being processed under this system. Periodic sampling by city enforcement personnel

JAN - 6

WH-547

is carried out to maintain compliance. As a result of this program, no significant upsets have occurred in any of the larger city sewage treatment plants which can be attributed to toxic industrial waste discharges. In addition, the restrictive state limits applicable to heavy metal discharges have been met in the effluent discharges from these plants. We consider this program to be a significant success in helping to alleviate water pollution problems in the Houston area as well as in meeting the federal requirements for cost recovery.

This does not mean, of course, that the city of Houston has no problems with regard to wastewater treatment. The largest city plant is seriously overloaded, a condition that will not be alleviated for another two years or so when a large new facility will go into operation. The rapid growth of the city has placed a severe strain on the sewer system in some areas. However, we do not feel that these problems have been aggravated by accepting industrial waste under the conditions imposed by the present ordinance. Likewise, refusing to accept industrial waste in the future will not help in solving these problems; rather, we feel that our problems would be increased under the changes presently scheduled.

Of the permits issued, approximately 100 have been issued to facilities which discharge in excess of 50,000 gallons per day. These include rice mills, other food processing plants, a brewery, metal finishing plants, and others. These permits also cover facilities that would be hard to classify as industrial or non-industrial such as hospitals, amusement parks and others that discharge sanitary waste that may contain other constituents that need to be controlled. If these waste streams cannot be discharged into the city sewer, each facility would have to build and operate a treatment plant and discharge the effluent under a permit from the Texas Department of Water Resources. This proliferation of small plants would be undesirable for the following reasons:

1. Operating efficiency and cost are both more favorable due to the economies of scale. As a general philosophy, a city's wastewater problems can be managed more effectively by using a few large plants than by using a large number of small plants.

2. Small wastewater treatment units are more subject to upset conditions, temporary overloading, or other conditions causing accidental or short term discharges which would be detrimental to water quality. Discharge into a large sewer system provides a method to minimize the impact on both the treatment facility and the receiving environment of any unique or unusual problems. Under our present system, the operating efficiencies of our larger treatment plants are not disturbed by short term changes in the industrial discharges received.

3. Enforcement and surveillance costs borne by state and local control agencies would be increased due to the necessity to maintain surveillance of a larger number of plants. If the current change had been in effect for some time, the addition of 100 plants would increase by about one-third the number of plants to be checked periodically. Due to the intermittent nature of many industrial operations, the actual work load would increase proportionately much more than the number of facilities included, since effective control for some processes requires a very high frequency of sampling.

4. An industrial facility presently discharging wastewater into the city sewer system could continue to do so, since the amendment only affects facilities constructed with grant funds received after November 15, 1981. However, if the city later re-routed the same discharge to a new treatment plant built after that date, the discharge would no longer be allowable. Also, new industries served by treatment plants built after the same date could not discharge into the city sewer system. This unequal treatment of different industries based on which city sewage treatment plant might receive wastewater would create inequities. The only way to avoid such inequities is for the city to treat all industrial discharges alike, without regard for which city- operated treatment plant might happen to process the wastewater that is discharged.

Finally, the language of the amendment contains a source of confusion with the wording ". . . in excess of a flow per day equivalent to 50,000 gallons per day of sanitary waste." This equivalence might be determined by hydraulic flow, BOD, suspended solids, COD, or other measurements. These various determinations usually will not be consistent with each other and confusion would arise in interpreting this language.

In summary, the City of Houston has an excellent plan under the present city ordinance, which was developed to meet water quality and cost recovery requirements established by federal law and EPA. It is working well to minimize water pollution from industrial sources and to provide an equitable basis for distributing the costs between the general public and private interests. The recent amendment would adversely affect the success we have had under this plan, and we hope that it will not be implemented. There may very well need to be some limitations on the use of city sewers to dispose of industrial waste, based on some maximum amount which could not be handled satisfactorily in a city sewer system. However, such matters should be decided by the city or other local government on the basis of local conditions and should not be subject to legislative or administrative decisions in Washington.

We hope these comments will be helpful in your evaluation of this legislation. Please let me know if we can furnish additional information that would be useful.

Very truly yours,

Herbert C. McKee

Herbert C. McKee, Ph.D.
Assistant Health Director
for Environmental Control

HCM/cf

Approved:

Judith Craven M.D.

Judith Craven, M.D.
Director of Public Health

AMERICAN FROZEN FOOD INSTITUTE • 1700 OLD MEADOW ROAD, SUITE 100 • McLEAN, VIRGINIA 22102
(703) 821-0770

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The Quaker Oats Company
Chicago, Illinois

January 13, 1981

Mr. Henry Longest, II
Industrial Users Study
Municipal Construction Division (WH-547)
Room 1217A
Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Dear Mr. Longest:

The American Frozen Food Institute (AFFI) welcomes this opportunity to submit preliminary comments to EPA regarding the Industrial Users Study in response to the request for such in the December 1, 1980 Federal Register. AFFI has actively participated in various meetings with the EPA staff responsible for completing the Industrial Users Study as mandated by section 4 of Public Law 96-483, (otherwise known as the Stafford Amendment) and intends that these comments be part of the public record in addition to any other information we may submit in the future for inclusion in the study.

AFFI believes that when the construction grants program was developed, the intent of Congress was to encourage joint industrial/municipal wastewater treatment. The Stafford Amendment discourages such a practice since it would require the industrial users of a POTW to provide the additional capital to construct that portion of the municipal facility which would treat industrial wastewater. This means an industry plant would be forced to provide "up front" money for construction of a municipal facility. Such an expenditure cannot be treated as an investment due to current tax laws, and many industry plants will look at other options for wastewater treatment, forcing the municipality to change the facility plan. For practical purposes, municipalities must have a grant request approved by July 1, 1981 in order to meet the November 15, 1981 Stafford Amendment cutoff date. It takes at least three months for each step of a funding request to be approved by EPA. The Agency should consider expediting this process.

There are a number of options available to a company when faced with local implementation of the Stafford Amendment: the company could decide to close the plant if it cannot be shown to be cost effective; the company could transfer production of heavy wasteload products to another location in the

United States; the company could build its own treatment system; or the company could work with the municipality to develop a plan to upgrade the POTW through expense dollars in order for the POTW to meet present effluent limitations.

In all but the last situation, AFFI believes the locality would lose valuable participation by industry in the community.

Congress, in passing the Stafford Amendment, recognized that there is a limited amount of construction grant funds available to the states for fiscal year 1981. A priority system of funding allocation to states and localities makes sense, therefore, so that construction grants money is utilized depending upon the need for water pollution control in any given municipality. These needs should be identified on the basis of water quality rather than technology.

A clarifying point we would like to make regarding local user charges is that there are no uniform rates or charges for BOD, suspended solids or flow across the nation. Charges for these limitations must be developed by the local administration to meet the needs of the community.

The real issue to be addressed in the Stafford Amendment study, we believe, is how do we - the federal government, state government, municipalities and users of publicly owned treatment works - sustain POTW's for the long run? There must be a means to raise capital and operation and maintenance dollars so the POTW can remain viable. The Stafford Amendment confuses this issue significantly by excluding industrial users of a municipal system from the community of users of the POTW.

AFFI supports the construction grants program and believes the federal government should continue to grant federal money to municipalities for pollution control programs.

Sincerely,

Hugh Symons

Hugh W. Symons, Vice President
Research & Technical Services

HWS:dl

• ADVANCING VOLUNTARY LEADERSHIP IN A CHANGING WORLD

Chamber of Commerce of the United States

RESOURCES AND ENVIRONMENTAL QUALITY DIVISION
DR. HARVEY ALTER, MANAGER
202-659-6172

1615 H STREET, N.W
WASHINGTON, D.C. 20062

December 31, 1980

U.S. Environmental Protection Agency
Municipal Construction Division (WH-547)
Room 1217-A
401 M Street, S.W.
Washington, D.C. 20460

ATTENTION: Mr. Thomas A. Whalen

Gentlemen:

On behalf of the more than 102,000 members of the Chamber of Commerce of the United States, we appreciate this opportunity to present our views on the subject of the Industrial Cost Exclusion (ICE) provisions of P.L. 96-483.

The U.S. Chamber actively supported the repeal of the Industrial Cost Recovery (ICR) provision in P.L. 92-500, largely on the basis of a study by an EPA contractor (Coopers & Lybrand) which showed that the ICR concept failed to meet the objectives set out for it by the Congress in 1972. The U.S. Chamber likewise did not support Senator Stafford's amendment to S-2725 which resulted in the ICE concept. We do not have sufficient time to collect data on the impacts of ICE because of the deadlines imposed upon EPA by Congress in the ICE study mandate in P.L. 96-483. The U.S. Chamber would, however, like to share its concerns with respect to ICE, particularly as they relate to the plight of businesses located in our older cities.

The U.S. Chamber strongly believes that ICE will frustrate our national water quality improvement goals as expressed in the Clean Water Act. Our reasons for this are as follows:

> The 1972 Act clearly eucouraged the construction and operation of municipal waste treatment systems which would handle both household and industrial wastes, provided the wastes were compatible and did not contain toxic substances. Congress recognized that joint industrial/municipal treatment is a practical and effective method of dealing with the wastewater treatment problem in urban areas.
>
> It was the clear intent of Congress in 1972 to avoid the unnecessary proliferation of waste treatment facilities. Having every industry treat its own wastes, particularly in large urban areas, wastes resources, increases energy consumption and multiplies the serious problem of sludge disposal.

The ICE singles out one class of industry -- those plants discharging more than 50,000 gallons of wastewater per day — and treats them as second-class citizens. In contrast to all other users of municipal treatment plants -- homeowners, commercial establishments, and small industries -- these larger dischargers would be singled out for a "negative subsidy" in that federal appropriations could not be used for their share of the treatment facility. In effect, the tax dollars which this single class of industry contributes are not as good as the tax dollars contributed by other classes. ICE singles out one characteristic -- volume of wastewater effluent — and makes some industries pay twice for their wastewater treatment facilities. The arbitrary classification of certain industrial users as second-class citizens is not based on criteria of profitability, ability to pay, or contribution to the nation's economy, etc. A large and profitable enterprise which has a waste flow under 50,000 gallons per day is allowed to benefit from federal support of POTW construction; a marginal industry whose contribution is above 50,000 gallons must pay separately for its capacity allocation. This makes little sense and will create additional examples that pollution control laws drive companies out of business and decrease employment.

The effect of ICE can only be to seriously impair the continued existence of many businesses which operate old facilities in urban areas and which will be hard-pressed to come up with the large sums of money required to fund their share of local treatment projects. Those businesses which are profitable may find it even more tempting to leave urban areas for new facilities in rural areas where cheaper, independent treatment is possible. The economic impacts of such an exodus would be devastating.

The U.S. Chamber recognizes the pressures to contain the cost of the federal construction grants program. We recognize that EPA in the past few months has been evaluating alternatives for reducing costs of the Construction Grants Program (the 1990 strategy). EPA's own analyses show that ICE would eliminate only eight percent of construction grant fund requirements while several other alternatives exist for achieving much greater savings without the economic and employment impacts of ICE.

ICE frustrates the objectives of other federal programs designed to encourage industries to remain in urban areas. Examples are HUD's Urban Development Action Grant Program and the Department of Commerce's Economic Development Administration Grant Program. These frequently provide funds for sewers, water lines, and other public improvements in order to help keep industry in urban, high-unemployment areas. The ICE will have precisely the opposite effect.

> Finally, we see ICE creating an administrative nightmare. Most urban POTWs, for example, serve many large industrial dischargers. For those POTWs proceeding with major upgrading projects, achieving agreement as to the cost-sharing among all users contributing more than 50,000 gallons per day would be a major task. If one or more industres could not afford to pay their calculated share of the new treatment plant, those firms would have to shut down and the remaining users would have to pay more. Consideration should also be given to the time lags resulting from the need to carry out complex negotiations with each affected business.

In conclusion, the U.S. Chamber believes ICE will frustrate -- rather than advance -- our nation's clean water goals. While having only a minor impact on reducing federal grant outlays, ICE will most assuredly create major negative environmental, economic and employment impacts and will add to the problems of older cities. A balance must be struck. All users of POTWs should be able to benefit equally from support of POTW construction so our goals of clean water do not unnecessarily conflict with those of increasing employment and reindustrializing our nation.

Sincerely,

Harvey Alter

CMA

CHEMICAL MANUFACTURERS ASSOCIATION

January 26, 1981

Mr. Thomas A. Whalen
Industrial User Study
Municipal Construction Division (WH-547)
Room 1217A
401 M Street, S.W.
Washington, D. C. 20460

Dear Mr. Whalen:

The Chemical Manufacturers Association (formerly the Manufacturing Chemists Association) submits the following comments on EPA's recent amendment to Subsection (k) of Public Law 96-483, Industrial Cost Exclusion (ICE), announced in the Federal Register, 45 Fed. Reg. 79573 (December 1, 1980), and titled, "Grants for Construction of Treatment Works; Exclusion of Major Industrial Users; Impact Analysis." These comments were prepared after deliberation and consultation among CMA members.

The Chemical Manufacturers Association (CMA) is a nonprofit trade association having approximately 190 member companies in the United States, representing more than 90 percent of the production capacity of basic industrial chemicals within this country. CMA is currently surveying its members to get detailed information on the effect of ICE on those companies. When the survey is complete, we will forward a summary of our findings. However, we did want

Formerly Manufacturing Chemists Association—Serving the Chemical Industry Since 1872.
2501 M Street, NW • Washington, DC 20037 • Telephone 202/887-1100 • Telex 89617 (CMA WSH)

to submit a statement for inclusion as part of the administrative record expressing our concern with the disruptive effect of ICE on many companies and municipalities.

The ICE provision represents a significant policy change from the 1972 Clean Water Act amendments which encouraged industrial participation in publicly owned treatment works (POTWs). Just as the Industrial Cost Recovery Program discouraged industrial participation in POTWs, the ICE provision also will completely eliminate any incentive for industrial participation thereby resulting in an increase in point source discharges that must be regulated.

During the limited congressional debate on ICE, the argument was made that continuance of industrial participation in a POTW without a requirement for pay back through some mechanism such as Industrial Cost Recovery would unfairly disadvantage companies which build their own treatment systems. This argument, however, does not hold up to close scrutiny when one considers the federal and many state tax benefits accruing to companies that build their own systems. Such tax relief measures are at public expense just as is industrial participation in a POTW.

If the ICE prohibition on the use of federal construction grant money for facilities to handle industrial flow causes many companies to withdraw their plans to cooperate with municipalities in use of POTWs, the POTWs will be faced with excess capacity requiring increased operating and maintenance costs for remaining participants. On the other hand, withdrawal of industrial users may warrant redesigning of the POTWs to a smaller scale. Such a delay will result in continued unabated discharges, expenditure of additional funds for design and engineering studies, and an increase in construction costs through inflation.

Lack of a more thorough debate and corresponding legislative history providing greater understanding of congressional intent in the passage of ICE leaves open to broad interpretation the obligations of industrial users who are already tied into POTWs which also need to expand. For example, if a POTW operating at full capacity applies for a construction grant to expand its facility, there are no guidelines in the legislation to interpret the final financial obligation of existing industrial users. Without such guidelines, any new financial burden imposed on industrial participants may result in litigation, delay, stifled economic growth, and possible withdrawal, if feasible, from the POTW system.

In the congressional hearings and debate on repeal of Industrial Cost Recovery, the point was made time and again that it was extremely difficult to deal with any degree of certainty the financial obligation of industrial users. Very simply, it was difficult to determine what percentage of a POTW was dedicated to the treatment of effluent from a particular industrial participant.

The difficulty that has been experienced in determining financial obligations through Industrial Cost Recovery will also be faced in trying to determine the exclusionary costs of the federal construction grant mandated by ICE.

Thank you for the opportunity to express our views. We would be pleased to discuss our comments with the Agency's personnel or furnish further data should you believe such data are necessary. For additional information, please contact Dr. Robert R. Romano at (202) 887-1178.

Sincerely yours,
Geraldine V. Cox
Geraldine V. Cox, Ph.D.
Vice President and
Technical Director

FIBRE BOX ASSOCIATION
5725 EAST RIVER ROAD
CHICAGO, ILLINOIS 60631
(AREA 312) 693-9600

January 6, 1981

U. S. Environmental Protection Agency
Industrial Users Study
Municipal Construction Division (WA-547)
Room 1217-A
401-M Street, S. W.
Washington, DC 20460

Ref: WH-FRL 1685-5
45 FR 232 P 79573

Gentlemen:

The Federal Register of December 1, 1980 requested comment on Section 3 and 4, provisions of recently enacted PL 96-483.

The Fibre Box Association (FBA) is the trade Association of the corrugated and solid fibre box industry (SIC 2653). We represent 110 member companies engaged in the manufacture of corrugated boxes. They produce 67% of the national total. Our Association is keenly interested in this matter since about 95% of the 1,400 establishments involved in making boxes discharge into Municipal Treatment systems.

We feel that the improvements to the Act introducted by the repeal of the ICR provisions, are nullified by the Stafford Amendment which introduces a complicated and perhaps unworkable mechanism in the determining of the cost apportioning of an industrial user. We also feel that the "equivalence" of an industrial discharge into a sanitary sewage should be clarified by EPA to reflect the latest state of the art. This is important because, otherwise, the industrial user will be penalized for its water conservation efforts.

In commenting as requested, we wish to reiterate that we approve of the repeal of the Industrial Cost Recovery provisions of the Act. We are in agreement with the following comments from the Senate Congressional Record of June 25, 1980, specifically from Senator Chaffee's summary of the ICR genesis and failures.

ICR was first enacted in the 1972 version of the Clean Water Act intending to require industrial users to pay for that portion of the Federal grant to the municipality construction cost of wastewater treatment systems and facilities. There were specific proposals to be fulfilled by the ICR scheme, among them, parity, water conservation, avoiding costly excess capacity and the insuring of self-sufficiency of constructed systems.

Because of the unpopularity and questionable justification of the ICR provision, Congress in 1977 mandated an 18-month moratorium on ICR and a 12-month study by the Agency. Due to the inadequacy of the initial study by EPA and the continued unpopularity of the ICR provision, the moratorium was extended through June 30, 1980.

The final EPA report concluded, after reviewing 227 sanitary districts and 394 industrial plants, that ICR failed to accomplish the purposes for which it was enacted. The study revealed that the grant program did not provide subsidies to the industrial users; that ICR did not encourage water conservation; and that ICR did not deter construction of excess capacity nor did it affect decisions on siting. Finally, on the Act's objective to insure self-sufficiency of municipalities, the EPA study concluded that ICR failed to make any significant contribution towards their financial independence.

In the House Congressional Record of October 1, 1980, Rep. Clausen expressed misgivings about the Stafford Amendment and reflected EPA's doubts about the administrative workability of the Stafford Amendment.

It is because of this previous history that we question the usefulness of the Stafford Amendment as expressed in Section 3. The Senate Congressional Record previously mentioned, gives an example of what to expect regarding the unworkability of fairly proportioning costs. In responding to Senator Mathias, on the matter of the proportional costs (Senate Congressional Record - S-8187), Senator Stafford indicated he expects the Agency to carefully evaluate the actual cost of treating industrial wastewaters. We respectfully believe that after the recently recognized failure of ICR and the EPA study, no workable and equitable proportioning mechanism could be established,

Two of the four initial objectives of the Act, in providing for the ICR program, remained intact ofter Congressional review. They are water conservation and pollution control and they are very much meshed. Water conservation is an area in which our general industry (SIC 26) has accomplished remarkable achievements. Hydraulic and pollution loads are the two critical parameters in the design of treatment facilities. Excess capacity and water conservation go together hand in glove. Credible regulations which encourage water conservation would insure that the designers confidently factor in proper, and not excessive, hydraulic factors.

It is important that in the March, 1981 report to Congress, EPA reflect the overall Congressional water conservation goals. They may be jeopardized if there is no clarification of the Stafford Amendment's term "flow per day equivalent to fifty-thousand gallons per day of sanitary waste." The report must factor in the latest available information which indicates how water conservation would impact on sanitary waste characteristics. The equivalent sanitary waste of the 80's will be different from the 70's and 60's. A case in point was the study you sponsored in the Bay Area as published in the Journal of Water Pollution Control Federation of April, 1980 (Vol. 52, No. 4, Pg. 730), This study factually reveals the change in conventional sanitary waste characteristics which result from a change in sewage flow due to water conservation efforts. Conventional BOD and TSS concentrations in the 250-300mg/l range increased to the 400-450mg/l range. This occurred while there was a simultaneous observable improvement in wastewater treatment facility operating performance.

It also must be remembered that our industrial category, as many others, presents neither a significant pollution problem, nor do our wastes interfere with the efficient operation of public owned treatment waterplants. The Environmental Protection Agency on two previous occasions has indicated its agreement with this fact. First, in January 1975, you filed a Brief in the U. S. District of Columbia excluding our industrial sector (section F) from pretreatment guidelines. More recently, in May, 1979, and on the matter of priority pollutants and at the same court, the Agency again requested similar exclusion.

We respectfully request that the EPA in responding to the Congressional mandate, reflect, among other things, the practical and technically-sound details on sanitary wastes characteristics which encourage water conservation.

Sincerely,

Thomas J. Muldoon

Thomas J. Muldoon
Executive Vice President
Fibre Box Association

S. F. Galeano Ph. D P. E.
Vice-Chairman
Environmental Committee

NAM
National Association
of Manufacturers

Resources and Technology Department
Energy
Environmental Affairs
Natural Resources
Science & Technology

December 31, 1980

Industrial Users Study
Municipal Construction Division (WH-547)
Room 1217A
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20640

Re: Grants for Construction of Treatment Works, Exclusion of Major Industrial Users; Impact Analysis. 45 FR 79573, December 1, 1980.

Sirs:

On December 1, 1980, the Environmental Protection Agency (EPA) published a "request for comments" regarding the potential effect of a recent amendment, Public Law 96-483, to the Federal Water Pollution Control Act. Section 3 of that amendment provides that grant assistance shall not be used after November 15, 1981, for the construction of any portion of a publicly owned wastewater treatment works designed to serve a major industrial user. Section 4 of the amendment directs EPA to:

> . . . study and report to the Congress no later than March 15, 1981, on the effect of the amendment made by section 3 on the construction of publicly owned treatment works, industrial participation in publicly owned treatment works, treatment of industrial discharges, and the appropriate degree of Federal and non-Federal participation in the funding of publicly owned treatment works.

The National Association of Manufacturers (NAM) is a voluntary membership organization of some 12,000 companies engaged in manufacturing in the United States. Together, these companies employ approximately 75 per cent of the employees producing manufactured goods in this country and account for approximately the same percentage of manufactured goods produced. NAM is affiliated with an additional 158,000 firms through the National Industrial Council and NAM's Associations Department. Approximately 80 per cent of NAM members and affiliates are classified as small businesses that would, we believe, be deeply affected by Section 3 of P.L.96-483 ("amendment").

1776 F Street, N.W.
Washington, D.C. 20006
(202) 626-3700

Major Industrial Users

A "major industrial user" of a publicly owned treatment works (POTW) is defined by the amendment as one whose wastewater flow is "in excess of a flow per day equivalent to fifty thousand gallons per day of sanitary waste." While this may sound like a generous exemption, in reality 50,000 gallons per day is a rather minimal amount for companies large and small. This is especially true for industries characterized as water-intensive--pulp and paper, food processing, textiles, chemicals and others. The amendment would, in effect, discourage companies that are planning to join a POTW from doing so by excluding them from the benefits of the national construction grants program. This appears to NAM to signal a major and undesirable shift in national policy away from the objectives of (1) encouraging industrial participation in municipal waste treatment systems and (2) encouraging regional approaches to wastewater treatment and disposal.

The City of Watsonville, California, conducted an analysis of the impact of the amendment on its local industrial users:

> Of the 19 industries involved in our project, 17 (90%) have a capacity requirement greater than 50,000 gallons per day and would be ineligible for grant funding. These 17 industries, located in the City of Watsonville and in the community of Pajaro in Monterey County, would be required to provide independent financing for approximately $8.3 million of the total estimated cost of $20 million. (This estimate assumes that private funds would be substituted for the 75 per cent federal grant, but that State funding at 12½ per cent would still be available).
>
> . . . certain individual companies would be required to provide as much as $1.8 million at the initiation of the project from an independent financing source. This initial cost would be in addition to a projected average increase in annual costs of approximately 340 per cent above current charges. Certainly many, if not all, of our industries will refuse to participate in this project because of the unacceptable financial burden. At a minimum, the City would be required to re-study the situation to determine which industries might close down, re-evaluate the required capacity for the treatment plant, and assist the local industries in evaluating alternative financing sources. If our project could be revised and continued in some form, a minimum delay of at least one year would probably be required for further study. Furthermore, six years of planning and $1.5 million in consulting contracts would become obsolete.[1]

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[1] Letter from W. Johnston, City of Watsonville, Cal., to the Honorable Leon Panetta, U.S. House of Representatives, July 23, 1980.

There are doubtless many other municipalities throughout the country with problems similar to those of Watsonville, California. NAM therefore urges EPA to give close attention and special consideration to the difficulties that will be encountered by small municipalities and their local industries. EPA should also attempt to verify the assertion that the 50,000 gpd exemption will exclude a large majority of industrial POTW participants.

Industrial Cost Recovery and the Amendment

In addition to the cutoff of federal funding of POTW capacity used by "major industrial users," P.L.96-483 repealed the industrial cost recovery (ICR) provisions of the Federal Water Pollution Control Act. As originally enacted in 1972, ICR required larger industrial users of POTWs to repay the federal portion of the construction grant devoted to the POTW capacity used by these companies. The objectives of ICR included: elimination of the perceived competitive advantage of industries using POTWs over those who treated their own waste water; provision of adequate, but not excess capacity for planned future growth; water conservation; and, promotion of local self-sufficiency for financing future capacity expansions.

NAM and others argued at that time and in the ensuing years that ICR unfairly imposed a double burden on industrial POTW participants, because it ignored the fact that industry, through federal, state and local taxation, already contributed to the general revenues from which the construction grants program received its sustenance. Congress agreed in October 1980, and repealed the ICR program for a number of reasons, not the least of which was the failure of ICR to meet its objectives.

The repeal of ICR, therefore, removed the double taxation burden. In the absence of the amendment, industrial participants in POTWs would be treated in the same manner as commercial and residential users. Like commercial and residential users who are billed for their water and sewer usage, industrial POTW participants would be billed a "user charge," based on their daily waste water flow into the POTW. NAM believes that this is equitable and reasonable.

The amendment, however, is not, becasue it removes the benefits conferred by tax payment. Payment of local, state and federal taxes by future industrial POTW participants will not benefit them in the least when the time comes for them to hook into the POTW. Instead, federal funding derived from general revenues made up in part from the taxes paid by the prospective participant, will be denied for the POTW's industrial capacity. The prospective participant, perhaps in conjunction with the municipality, will be forced to provide his own financing for that capacity. Some other likely outcomes include:

--Where possible, prospective participants will opt not to join the POTW and will self-treat their waste water. This could lead to a proliferation of treatment facilities and costly, wasteful excess capacity.

--Presently operating POTWs, although not now subject to the amendment, will be in the future if industrial growth requires expansion of the facility. Many industrial POTW participants, when faced with the prospect of financing this expansion, will decide to withdraw from the POTW, leaving costly and inefficient excess capacity behind.

--Most POTWs have an optimum operating capacity at which their operations are the most efficient and effective. Unused capacity could adversely affect the operations of these POTWs.

NAM understands and appreciates the rigid time schedule within which EPA is conducting this study, and stands ready to assist the Agency in carrying out its mandate. We also realize that this compressed schedule precludes EPA from studying all the aspects and ramifications of P.L.96-483. We do urge, however, that EPA give special attention to the difficulties created by P.L.96-483 for small municipalities and their local industries, especially those smaller companies with water usage in excess of 50,000 gallons per day.

Respectfully submitted,

Mark N. Griffiths

Mark N. Griffiths
Associate Director
Environmental Affairs

National Food Processors Association
1133 Twentieth Street N.W., Washington, D.C. 20036
Telephone 202/331-5900

Environmental Affairs Division
Edwin A. Crosby, Ph.D.
Senior Vice President
202/331-5967
Jack L. Cooper
Director
202/331-5925
Mary E. Losikoff
Assistant Director
202/331-5926

January 9, 1981

Mr. Thomas A. Whalen
Industrial Users Study
Municipal Construction Division (WH-547)
U. S. Environmental Protection Agency
Washington, D. C. 20460

Regarding: Response to EPA's December 1, 1980 Request for Comments on the Effects of Section 3 of PL 96-483.

Dear Mr. Whalen:

The National Food Processors Association is a nonprofit trade association with about 550 processing members who pack approximately 90% of the total U. S. production of canned foods for human consumption, primarily fruits, vegetables, seafoods, meats, soups, baby and ethnic foods. Approximately 40% of our members' plants currently participate with publicly-owned treatment works (POTWs) for joint treatment of food processing wastewaters and domestic sewage. The majority of these plants discharge more than 50,000 gallons per day of sanitary waste equivalent. Therefore, plants that are in POTWs that did not receive a Step II grant by May 15, 1980, or that will not receive a Step III grant by November 15, 1981, will be adversely affected by Section 3 of PL 96-483 when the POTW applies for federal financial construction assistance. We are therefore pleased to provide the following comments on the effects of the Stafford Amendment on our members who use POTWs.

GENERAL STATEMENT

Without a strong industrial base, local economies suffer, goods and services become scarcer, and higher costs lower the standard of living of each individual. However, both the industrial cost recovery (ICR) requirement and Section 3 of PL 96-483 weaken the industrial base of communities. Both of these amendments consider industrial plants as a separate part of communities. The following facts are ignored by both concepts: 1) food processing plants provide jobs not only for the community residents who work at the plants but also for support services such as carton and can manufacturers, local farmers, farm labor, farm suppliers, truckers and distributors; 2) food processing and other industrial plants provide consumers with the goods and services that all of us have become accustomed to and now require to maintain and improve our standard of living; 3) food processing plants pay federal, state and local taxes and accordingly should be allowed to benefit from any federal grant the same as any other community member would benefit, no more and no less.

When considering whether a construction grant should be awarded to a particular POTW, all sources of pollutants discharged into the local community's waterways should be evaluated. If construction of a POTW is the most cost-effective method of achieving necessary pollutant reductions, then all users of the POTW should benefit equally from the award of a federal grant for its construction. This is not to say that every POTW should receive a federal grant, but that if a federal grant is awarded, then all users should benefit. The members of this Association see no reason why industrial users should be prevented from receiving the benefits of grants for their share of the construction costs on the same basis as other community members.

As will be explained below, most food processing plants which discharge process wastewaters into POTWs have much higher costs than their competitors which practice self-treatment. Because most plants using POTWs have little available land and no access to receiving waters, they have no choice but to stay with the POTW and pay the higher treatment costs. If the cost is so high as to be prohibitive, these plants must either cut back on production, expend capital in the plant to reduce pollutant loads and flows, relocate, or close down.

The ultimate effect of Section 3 of PL 96-483 will be to force many marginal food processing plants out of business. These will be plants that cannot justify or secure funding for POTW participation and that do not have the option of providing self-treatment. Many of these plants will be in economically distressed areas. Results from such shut-downs are increased community unemployment, a shrunken tax base, and loss of income to support services such as farming, trucking, and can manufacturing.

Where the effects are not so severe as to cause shut-downs, the effects will nevertheless be felt by the entire community. In some cases the plant may curtail operations, resulting in job losses. In other instances, the plant will have insufficient available capital or insufficient potential return on capital to allow normal company growth, thus creating stagnation in a normally growing community. Any time that industrial capital resources are diverted to a project providing no financial return, less money is available to the citizens of the community, either because of direct reductions in payrolls, taxes, purchased goods and services, and profit distributions, or because of indirect effects of future business decisions prompted by lower profits.

Conclusion

We believe that both ICR and Section 3 of PL 96-483 were mistakes. Immediate repeal of Section 3 of PL 96-483 is needed to allow our communities to proceed toward the goals of the Clean Water Act in an equitable manner and without further delays.

EFFECTS ON THE CONSTRUCTION GRANT PROCESS

Probably the greatest effect of Section 3 of PL 96-483 will be an increase in the delay in the award of grants and subsequent delay in meeting the objectives of the Clean Water Act. While some communities are far enough along in their Step II/Step III planning process that with an increased effort on their part and a willingness on the part of states and EPA to speed the grants along, they will be able to receive a Step III grant before November 15, 1981.

For those communities unable to obtain a Step III grant by November 15, all work on their grant has effectively halted and cannot begin in earnest again until POTW officials can obtain adequate assurance from their major industrial users that they are or will be willing to provide up-front capital for the construction of industrial capacity. Where the industrial users are unable or unwilling to provide such up-front capital, the community must determine if it wishes to include the cost of industrial capacity in its own municipal bonds. A considerable delay will occur while the community takes the necessary steps to secure voter approval for the new bonds.

Another option would be for industrial users to join together and issue industrial development bonds. This activity will also take a considerable amount of time, probably about two years.

Such delays will have significant effects not only on meeting the objectives of the Clean Water Act, but also on the cost of the treatment system. With inflation running at least 10% a year, a two-year delay would result in a significant increase in the total cost of the project to the entire community, the state, and to the EPA construction grant program.

EFFECT ON COMMUNITIES WHICH RECEIVED STEP II GRANTS BEFORE MAY 15, 1980

Communities which received Step II grants before May 15, 1980 and have reserve capacity will be able to offer such capacity to new industrial plants at no cost, other than for operation and maintenance. These communities will be in a position to attract industries.

Communities that did not receive the Step II grant by May 15, 1980 and that will not be able to secure their Step III grant by November 15, will not be in a competitive position to attract such industrial growth.

POTW TREATMENT COSTS VS. SELF TREATMENT COSTS

The greatest problem faced by food processors participating with POTWs for joint treatment is the fact that treatment in a POTW is generally 2 to 10 times more expensive than self-treatment. The vast majority of POTWs upgraded or built since 1972 were constructed to provide treatment by the activated sludge process. Activated sludge is a high construction cost technology built on a minimum of land with more back-up equipment and more expensive equipment than would otherwise be required. The back-up equipment is required by EPA's construction grant regulations and these regulations also require the equipment to have a longer life and is therefore more expensive. The process is capable of reducing pollutants to acceptable discharge limits within a maximum of eight hours.

The vast majority of food processing plants that provide self-treatment are located in areas where the wastewaters can be held for long periods of time; thereby allowing the utilization of low construction cost technology such as land application (spray irrigation) or lagoons which require seven days or longer to reduce the pollutants to acceptable discharge levels.

Also, the activated sludge process requires considerably more energy and operator attention and expertise than does land application or lagoon systems. Accordingly, the operation and maintenance costs are considerably higher for activated sludge systems. Thus, food processing plants participating in POTWs find the costs for wastewater treatment system construction, operation and maintenance significantly higher than for competing plants which self-treat.

A major factor contributing to the higher cost of treatment provided by POTWs is the many additional equipment and procedural requirements imposed by EPA's grant regulations that self-treatment plants do not have to meet. Also, the availability of the 75% Federal grant promotes "gold-plating" with its attendant higher costs.

The current POTW user charges (operation and maintenance), excluding construction costs, paid by industry now approximates the total cost of self-treatment. If an industrial user of a POTW is required to pay the construction cost as well, its total cost will be much higher than the cost faced by plants which provide self-treatment. Only if industry is not forced to absorb the construction cost will comparable costs exist between plants in POTWs and those which self-treat.

EFFECT OF PLANT LOCATION ON POTW USE

Urban Location

Food processing plants located in urban surroundings generally have no available land for self-treatment and must discharge into a POTW. Plants that are unable to secure funding for their share of POTW construction costs will be forced to move or close unless the community is in an economic position to raise the capital required to build the industrial capacity.

In spite of this factor, we believe that plants located in urban areas will be affected less by Section 3 of PL 96-483 than plants located in suburban or rural areas. Municipal officials in urban areas are generally more aware of environmental laws and regulations and how to comply with them than are municipal officials in suburban or rural areas. Because of this greater expertise, most urban communities have progressed on the state priority lists and have already obtained at least a Step II grant by May 15, 1980; thus, leaving many suburban and rural communities at the bottom of state priority lists where they could not obtain their Step II grants.

Industrial plants in urban areas that already have received their Step II grants will not be affected by Section 3 of PL 96-483. However, there are plants in urban areas where the POTWs have not obtained their Step II grants. These plants will be adversely affected. Many will be forced to reduce production or close, contributing to decay of the community, just because it did not obtain its Step II grant by an arbitrary date set after the POTW planning process had already begun.

Suburban and Rural Location

Plants located in suburban and rural areas may be able to disengage from the POTW and secure land to build a self-treatment facility; however, land surrounding food processing plants is currently too expensive to justify its use for wastewater treatment purposes. Another problem has been zoning. Many local officials are unwilling to zone land so that it can be used for industrial waste treatment even when all the pollutants are conventional.

Many rural communities have not progressed high enough on the state priority list to have already received a Step II grant. This is a procedure over which they have no control. These communities must accept their order on the priority list as determined by state officials. These suburban and rural communities have limited employment opportunities and will be the hardest hit by Section 3 of PL 96-483.

MANY FOOD PROCESSING PLANTS CANNOT AFFORD POTW CONSTRUCTION COSTS

With Section 3 of PL 96-483 in effect, each industrial plant must provide its share of capital funds for POTW construction in one of two basic ways. The municipality could finance the whole system and charge the industry for its share, plus financing costs, over a period of several years. A firm contract for the entire sum will probably be required. More often, however, the municipality will be unwilling or unable to finance such an amount, leaving the industry to raise its own capital.

Many food processing plants will not be able to remain with a POTW because 1) they will be unable to obtain required funds; 2) they will not commit capital to projects over which they have no control; or 3) the required investment in the POTW would not be justified by the expected profitability of the plant.

Inability to Secure Needed Funds

Many companies wishing to remain in business and within the POTW will be unable to secure needed funds on their own. Most of our members are seasonal. They generally borrow heavily in the spring to pay for the raw agricultural products, containers, labor, freight, etc. They then pay the borrowed money back in the fall and winter after they sell the products produced in the summer. In the current economic situation, most plants have already reached their credit limits and would be unable to secure a long-term loan to purchase capacity in a POTW. If the federal government guaranteed the loans, many food processors still could not afford the interest cost.

Unwillingness to Commit Capital to a POTW

Section 3 of PL 96-483 requires industrial users of municipal wastewater treatment systems to enter into a joint venture with a municipality and other industrial users for wastewater treatment. However, the industrial users will have no decision-making authority over how the municipal officials allocate the money invested by the industrial users. Entering into a joint venture of this type is not characteristic of how industrial companies allocate their scarce resources.

Companies investing in self-treatment systems negotiate their treatment requirements with state or EPA permit issuing officials. They do have substantial influence, including legal remedies, over the requirements that will have to be met. However, in the case of joint treatment with a POTW, it is the municipal officials who must negotiate the permit effluent limitations. Thus, the industrial users, while they may comment on the draft permit, will have no direct influence on the effluent limitations ultimately required to be met.

Food processing plants providing self-treatment have control over the design of the treatment facility. Industrial users of publicly-owned treatment works do not have this control. It is the municipal officials who determine the type of treatment system required, its design, and the contractor. Often times POTW officials build fancy (gold-plated) headquarters buildings with fancy landscapes to impress local residents. Industrial self-treatment facilities do not incorporate such features.

Food processing plants providing self-treatment have tangible assets. If production is discontinued, the company can sell the pumps, land, and other salvageable assets. In the case of industrial users of municipal wastewater treatment facilities, the company would have no asset if it were to discontinue operations and may even have a continuing liability to pay for POTW capacity constructed for its use. Also, food processing plants practicing self-treatment need not comply with the time consuming multitude of EPA regulations required by the construction grant program and are able to construct their facility in a much shorter time frame and at a significantly reduced cost.

Required Investment in POTW Capacity Would be More Than Could Be Justified by the Plant's Profit Projections

In many cases, the cost of participation in a POTW will be greater than the profit realized by the plant. The decision of company officials in such cases is obvious. In cases where the cost of POTW participation is less than the profit produced by the plant, company officials may still decide to move or close the facility. This is because the projected cost of POTW participation will reduce the profit margin of the operation to a level that cannot justify the expense. Most food processing plants operate on a two to five year projection. It is impossible for food processors to project 30 years into the future to determine if it will continue to be able to produce products economically.

ADVERSELY AFFECTED COMMUNITIES

In November, we conducted a survey of our membership to determine communities likely to be adversely affected by Section 3 of PL 96-483. The following is a list of such communities:

Arkansas	California	Georgia	Illinois	Kentucky
Fayetteville	Modesto	Douglas	Galena	Lawrenceburg
	San Jose			
	Santa Cruz			
	Watsonville			
	Buena Park			

Massachusetts
Framingham

Minnesota
Owatonna
Perham
St. James
Albany
Melrose

Missouri
St. Louis

New Jersey
Camden

New York
Horseheads
Walton

North Carolina
Asheville

Ohio
Bryan
Fremont
Defiance

Oregon
Salem

Pennsylvania
Fleetwood

Texas
Nacogdoches

Vermont
Troy

Virginia
Winchester
Independence

West Virginia
Martinsburg

Wisconsin
Beaver Dam
Bloomer

While this list is indicative of the widespread nature of the communities affected, it is not all inclusive. We know that many of the communities in which our members are located are unaware that Section 3 of PL 96-483 is in effect.

Twenty-two of our members responded to our questionnaire that 43 plants will be affected by Section 3 of PL 96-483. Most were undecided about how they will react. If the POTW offers to obtain the capital, many would accept. However, if the community does not obtain the needed capital, many would close, or seek to self-treat; a few would seek industrial development bonds.

We appreciate this opportunity to submit these comments on behalf of our members.

Sincerely,

Jack L. Cooper

cc: POTW Subcommittee

National Food Processors Association
1133 Twentieth Street N.W., Washington, D.C. 20036
Telephone 202/331-5900

Environmental Affairs Division
Edwin A. Crosby, Ph.D.
Senior Vice President
202/331-5967
Jack L. Cooper
Director
202/331-5925
Mary E. Losikoff
Assistant Director
202/331-5926

January 19, 1981

Mr. Thomas A. Whalen
Industrial Users Study
Municipal Construction Division (WH-547)
U. S. Environmental Protection Agency
Washington, D. C. 20460

Re: Reasons Why Many NFPA Members Have Not Provided Financial Data to EPA on the Effect of the Stafford Amendment

Dear Mr. Whalen:

At your request, National Food Processors Association hereby supplements its January 9, 1981 response to EPA's December 1, 1980 request for comments on the effects of Section 3 of P.L. 96-483, by providing the following reasons why many NFPA members have not submitted financial data on the effects of the Stafford Amendment specific to their operations:

° In its December 1, 1980 request for comments on the effects of the Stafford Amendment, the agency did not stipulate that submitted financial data would be treated confidentially. Most companies consider financial data on plant operations as proprietary and strictly confidential and would be reluctant to enter such information into the public record. This is especially true when such information might indicate future financial difficulties. Rumors of production cut-backs or plant closures could lead to the loss of key employees to competitive plants. Competitors learning of an adverse situation might initiate competitive practices such as price reductions to squeeze a firm's profitability and thereby drive it out of business or pressure it to sell out or merge on unfavorable terms.

° The time allowed for documentation of the adverse effect of the amendment was too short. The request for comments was published in the December 1, 1980 Federal Register, with comments due to EPA on December 31, 1980. With the time delay in mailing, and with the non-productive Christmas/New Year holiday period, companies did not have sufficient time to document with satisfactory detail the economic effect of the amendment. Additionally, most of the smaller companies -- the ones least likely to be able to afford POTW financing -- do not have employees with the qualifications or expertise to prepare such documentation.

° Companies operating in communities that have not completed their Step II design work do not know how expensive the POTW in their community will be. While such companies can estimate the percentage of total POTW capacity for which they may be liable, specific dollar figures are not now available to them.

We trust that this information will be useful to you. Please call me if you have any further questions.

Sincerely,

Jack L. Cooper

Jack L. Cooper

cc: POTW Subcommittee
Tom Moran

TANNERS' COUNCIL OF AMERICA, INC.
2501 M Street, N.W. • Washington, D.C. 20037 • (202) 785-9400

December 29, 1980

Douglas M. Costle, Administrator
Environmental Protection Agency
401 M Street, S.W., Room W1200
Washington, D.C. 20460

Dear Mr. Costle:

I'm writing to bring to your attention the impact study one of your staffers is preparing regarding Senator Stafford's amendment to the Clean Water Act. As currently devised, we feel the study is most prejudicial against the amendment and totally misrepresents the U.S. tanning industry.

Since the tanning industry is divided in its support of the Stafford amendment, the Tanners' Council has remained neutral on this legislation. Direct dischargers favor the amendment; small indirect dischargers are indifferent and the major indirect dischargers are opposed. We feel any analysis which includes the tanning industry must take this division into account. Last week, following a disconcerting telephone conversation, the Tanners' Council of America President Eugene Kilik and I met with Tom Whelan, your staff member responsible for the analysis. Mr. Whelan intends to visit only the Gloversville, New York and possibly the Milwaukee, Wisconsin areas where most of the tanners are strongly opposed to or not affected by the amendment. We suggested then, as I had in my earlier phone call, that Mr. Whelan contact Massachusetts and New Hampshire industry representatives for a more balanced view. He persisted that he was interested only in an "attitudinal case study".

We are quite certain the congressional intent in the request for an economic impact study was for an objective approach. We don't care whether U.S. tanners are a part of the study, however if they are, we insist that the report fairly reflect the competing views within the industry. Mr. Whelan's admitted bias precludes a helpful, disinterested review of the amendment.

We would be happy to cooperate in a fair study of the amendment's impact on the industry but we feel we can't encourage our members to participate in the current analysis.

We hope this matter merits your prompt attention.

Sincerely,

Elinor D. Talmadge

Elinor D. Talmadge
Vice President

cc: Senator Robert Stafford
Senator James McClure
Senator Jennings Randolph
Representative Nicholas Mavroules

American Leather–Hallmark of Quality

Law Offices
Loomis, Owen, Fellman & Howe
(formerly Counihan, Casey & Loomis)
2020 K Street, N.W.
Washington, D. C. 20006
202 296-5680

John E. Loomis
Stephen F. Owen, Jr.
Steven John Fellman
William H. Howe
James E. Anderson
Henry A. Hart
Timothy J. Parsons
Richard A. Steyer

Donald M. Counihan
1917-1969
E. Riley Casey
1923-1971

J. R. Pat Gorman
Elmer F. Bennett
Counsel

January 28, 1981

Industrial Users Study
Municipal Construction Division
(WH-547) Room 1217A
401 M Street, S.W.
Washington, D.C. 20460

Attention: Mr. Thomas A. Whalen

Re: Comments of Textile Rental Services Association of America in WH-FRL1685-5

Dear Sirs:

Section 3 of the Clean Water Act Amendments of 1980 (P.L. 96-483) states in pertinent part the following:

> "No grant made after November 15, 1981, for a publicly owned treatment works, other than for facility planning and the preparation of construction plans and specifications, shall be used to treat, store, or convey the flow of any industrial user into such treatment works in excess of a flow per day equivalent to 50,000 gallons per day of sanitary waste."

Section 4 of P.L. 96-483 requires EPA to report to Congress by March 15, 1981 on the effect of Section 3 upon, among other things, industrial participation in publicly owned treatment works, treatment of industrial discharges and the appropriate degree of federal and non-federal participation in the funding of publicly owned treatment works.

We are filing these comments as counsel to the Textile Rental Services Association of America (TRSA) in order to assist EPA in its preparation of this report.

TRSA is concerned that Section 3 of P.L. 96-483 will have an extremely adverse effect upon TRSA members and their employees and customers. In these comments, TRSA identifies the major shortcomings of Section 3 and the adverse effects which it will have on the TRSA member companies and their employees and customers. TRSA also requests an opportunity to meet with EPA prior to its release of the report required under Section 4 of the amendments.

I. TRSA and the Textile Rental Supply Industry

TRSA is a non-profit trade association whose members represent over 60% of the textile rental supply industry in the United States. This industry consists of linen supply (SIC 7213) and industrial laundering (SIC 7218). According to the U. S. Census Bureau figures in 1977 linen supply establishments in the United States grossed approximately $1.25 billion and industrial laundry establishments in the United States grossed approximately $1.5 billion. The linen supply and industrial laundering concerns in the United States employ well over 100,000 employees, the majority of whom are non-skilled.

U. S. Census Bureau figures indicate that the number of linen supply establishments in the United States has been steadily decreasing since 1963. U. S. Census Bureau figures also indicate that as of 1977 the sales trend for linen supply was down 2% per year and the sales trend for industrial laundering was stagnant.

II. Section 3 of P.L. 96-483 May Have an Extremely Adverse Effect upon the Textile Rental Supply Industry

TRSA is unable at this time to calculate the full effect of Section 3 of P.L. 96-483 upon TRSA members. This is due largely to the fact that Section 3 does not set forth a clear and specific test for determining who is a large industrial user subject to Section 3 (i.e. what is "equivalent to 50,000 gpd of sanitary waste?"). For example, Section 3 fails to clarify whether pretreatment by a large industrial user will be considered in determining whether the flow of such user is "equivalent to 50,000 gpd of sanitary waste". Nevertheless, it appears that many TRSA members will be treated as large industrial users under Section 3, and that a significant number of TRSA members will be effectively cut off from new, upgraded and expanded POTW facilities which have been developed with use of federal grants.

TRSA is concerned that where Section 3 does apply to a TRSA member, municipalities may choose not to work with the member by offering municipal bonds to finance that portion of new, upgraded and expanded POTW facilities attributable to large industrial users. Where this is the case, Section 3 will result in the closing of linen supply and industrial laundering plants.

A) Section 3 Fails to Incorporate Clear and Specific Criteria for Determining When Industrial Discharge Flow Exceeds 50,000 gpd of Sanitary Waste

We have been informed on an informal basis by EPA officials that under Section 3 of P.L. 96-483 the issue of whether an industrial user has a flow equivalent to 50,000 gallons per day of sanitary waste will be determined by the same test as that set forth at 40 CFR §35.905 for "industrial users", substituting 50,000 gpd where 25,000 gpd appears therein. If this test were incorporated into Section 3, every industrial user with a flow of more than 50,000 gpd or with a flow having a weight of biochemical oxygen demand (BOD) or suspended solids (SS) in excess of the weight of BOD or SS found in 50,000 gpd of sanitary waste would be adversely affected by Section 3.

One of the major shortcomings of the above test is that an industrial user is not given credit for pretreatment. Under the test an industrial user with a flow of less than 50,000 gpd may still exceed the limit due to a high concentration of BOD or SS. However, an industrial user with a flow of over 50,000 gpd is automatically deemed to have exceeded the limit, even though he may pretreat that flow so that the weight of BOD or SS in the flow is less than the equivalent weight of BOD or SS present in 50,000 gallons of sanitary waste.

In addition to taking into account pretreatment by industrial users, any test incorporated in Section 3 of P.L. 96-483 should set forth specific criteria which will enable industrial users to determine whether they are affected by Section 3. The existence of such specific criteria will encourage industrial users to pretreat their flows to avoid the limitations of Section 3.

B) Section 3 Provides No Guarantee that Municipalities Will Assist Large Industrial Users in Financing Costs Attributable to Such Users

Speaking to the problem of financing that portion of a POTW attributable to large industrial users, the Senate Report behind P.L. 96-483 states the following:

> "The Committee does not intend to prohibit the joint treatment of industrial and municipal waste waters in a publicly owned treatment works where the option is financially or otherwise attractive to a community. The grantee and industrial users would be free to arrange alternatives to federal financing under this program for that portion of the treatment works attributable to industry's use. The same tax advantages enjoyed by direct discharges could also be avail-

> able to those industries which participate in joint municipal-industrial treatment systems in the future. These include tax exempt municipal bonds for pollution control." S. Rep. No. 96-744, 96th Cong., 2d Sess. Reprinted in [1980] U.S. Code Cong. & Ad. News 8693 at 8703, 8704.

However, Section 3 of P.L. 96-483 provides no guarantee that municipalities will work with large industrial users by offering municipal bonds to fund the portion of new, upgraded and expanding POTWs servicing large industrial users. TRSA believes that many municipalities may choose not to do so. Therefore, the effect of Section 3 upon various TRSA members will differ largely depending upon the inclinations or arbitrary actions of the numerous municipalities. Another discriminatory result of Section 3 will be the fact that those TRSA members which happen to be located near new, upgraded or expanded POTWs will be adversely affected, while those TRSA members located near existing POTWs with adequate facilities will not be.

It is also important that EPA take note of the fact that, in reality, Small Business Administration loans are simply not available for the great number of TRSA members who would qualify as small businesses. Therefore, financing assistance from the municipalities is essential if TRSA members are to have any assurance that they will be able to have access to new, upgraded or expanded POTW facilities.

C) Application of Section 3 to TRSA Members Who Are Unable to Obtain Financing Will Result in Closing Down of Operations

Assuming that EPA does incorporate into Section 3 the test of 40 CFR §35.905 (See Title II. A) herein), TRSA estimates that approximately one-half of its members would be immediately affected by Section 3 simply on the basis that their total flow would exceed 50,000 gpd. Furthermore, an additional 25% of TRSA members could be affected by Section 3 even though their flow would be less than 50,000 gpd, since the BOD or SS of their flow would exceed the equivalent amount of BOD or SS present in 50,000 gallons of sanitary waste.

This fact, coupled with the lack of guarantee of municipal financing and the lack of availability of SBA loans means that a significant number of TRSA members will be effectively denied access to new, upgraded and expanded POTW facilities. This will be particularly true of the smaller operations which will have nowhere near the necessary financing resources to procure financing for their share of such POTW facilities.

Since contract hauling of such large volumes of discharge would also be economically infeasible, particularly in light of RCRA, such TRSA members would have to literally close down their operations. This in turn will result in loss of jobs for a significant number of unskilled workers. In addition, competition within the industry can be expected to drop significantly. It is evident that the adverse effects of such plant closings would spread across the board, covering the TRSA member companies themselves, their employees and their customers.

D) Section 3 of P.L. 96-483 as Currently Drafted Will Not Result in Significant Reduction of the Level of Pollutants Discharged to POTWs by Textile Laundering Operations

Although the current version of Section 3 of P.L. 96-483 could result in plant closings for numerous TRSA members, such closings would not reduce the amount of pollutants discharged to the various POTWs. The operations formerly performed by such TRSA members would be performed either by larger linen supply and industrial laundering companies or would be performed by on-premise laundries (OPLs) established by the former customers of the closed company.

Where a larger linen supply or industrial laundering company is able to finance its share of essential POTW facilities and takes over the operations of a smaller company which has shut down its operations, the larger company will be discharging to the POTW the same pollutants which the small company would have had it stayed in operation. Where the operations of a closed company are performed by several OPLs, each individual OPL is likely to have a small enough discharge volume to be able to discharge to the POTW without providing financing under Section 3. However, the total of pollutants which all of the OPLs discharge to the POTW on a combined basis would approximate the level of pollutants which would have been discharged to the POTW by the closed plant had it been provided with access to the POTW facilities. Indeed, the OPL activities would have an overall negative effect since the OPLs would consume and discharge more water due to the inefficiencies of their smaller operations. In short, regardless of whether a company can provide financing required by Section 3, the pollutants inherent in the operations of that company will be discharged to the POTW, if not by that company, then by the larger company or by the numerous OPLs which perform the operations formerly performed by that company.

In summary, while the application of Section 3 of P.L. 96-483 to TRSA members is not likely to reduce in any significant fashion the level of pollutants discharged by linen supply and industrial laundering operations to new, upgraded and expanded POTW facilities, such application is likely to cause a significant number of TRSA members to shut down their operations, which in turn will result in a decrease in competition in the industry and loss of jobs for numerous non-skilled employees.

III. Request for Opportunity to Meet with EPA Prior to Submission of March 15, 1981 Report

As noted above, TRSA is extremely concerned that the application of Section 3 of P.L. 96-483 to the textile rental services industry will have a severely adverse impact on the industry, and TRSA requests that prior to the final preparation of the EPA report to be filed with Congress, TRSA be given an opportunity to meet with EPA officials to further discuss the concerns of TRSA in this matter. TRSA is also most interested in discussing with the congressional committees who will be considering the EPA report and taking appropriate action thereon, the particular problems which Section 3 presents to TRSA members.

Very truly yours,

LOOMIS, OWEN, FELLMAN & HOWE

Steven John Fellman
General Counsel to Textile Rental
Services Association of America

Henry Ashton Hart
Counsel to Textile Rental Services
Association of America

ekn

United States Brewers Association, Inc.

1750 K Street N W Washington D C 20006

(202) 466-2400

HENRY B. KING
PRESIDENT

TWX 710-822-9208

December 29, 1980

Mr. Thomas A. Whalen
Industrial Users Study
Municipal Construction Division (WH-547)
Environmental Protection Agency
Room 1217-A
401 M Street, S.W.
Washington, D.C. 20460

Dear Mr. Whalen:

The United States Brewers Association, Inc. (USBA) appreciates this opportunity to submit comments regarding the potential effects of Section 3 of Public Law (PL) 96-483, the so-called "Stafford Amendment." USBA is a not-for-profit trade association of malt beverage producers and suppliers to the industry whose brewer members account for approximately 75 percent of total U.S. malt beverage production. USBA member companies employ almost 40,000 persons directly; over 500,000 persons in the U.S. are involved in beer production and distribution, and other related industries.

In 1972, the Congress passed PL 92-500, the Clean Water Act. This law greatly expanded the Federal construction grants program for publicly owned treatment works (POTW's). The law also mandated for the first time a new concept known as "industrial cost recovery (ICR)." Under this concept, treatment agencies could receive grant funds for the treatment of industrial wastes only if those industries affected agreed to pay back the amount of the Federal grants related to their contribution of wastes to the municipal treatment system. By 1977, the wisdom of this approach was increasingly being called into question. Congress, in passing amendments to the Clean Water Act (specifically, PL 95-217), directed that a study be made of the advantages and disadvantages of ICR and, at the same time, put into effect a moratorium on all ICR collections.

In order to carry out Congress' directive, the U.S. Environmental Protection Agency (EPA) engaged the public accounting firm of Coopers and Lybrand to analyze the impacts of ICR. Coopers and Lybrand, after conducting a comprehensive study, reported that ICR was not producing the desired results. As an example, ICR did not lead to an equalization of costs between those industries treating their own wastes and those industries discharging into POTW's. It was found that industries treating their own wastes could take advantage of industrial revenue bonds and rapid tax write-offs to build independent facilities, which resulted in lower overall waste treatment costs. Coopers and Lybrand also found

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that water conservation and waste reduction were not being brought about by ICR, but by skyrocketing water and wastewater utility costs.

The Coopers and Lybrand report sparked efforts by treatment agencies, industries and others to eliminate the ICR provisions from the Clean Water Act. The 96th Congress passed PL 96-483 which repealed ICR, but which also contained the Stafford Amendment. This Amendment created new problems, in that it prohibited any Federal grants for the treatment of wastes from industries discharging more than 50,000 gallons per day of sanitary waste after November 15, 1981.

USBA believes that the Stafford Amendment will not advance the goals of the Clean Water Act and should be repealed for the following reasons:

a. It was the clear intent of Congress in 1972 to avoid unnecessary proliferation of waste treatment facilities. Having every industry treat its own wastes, particularly in large metropolitan areas, diverts needed resources, increases energy consumption and multiplies the serious problems relating to sludge disposal.

b. The 1972 Act clearly encouraged the construction and operation of municipal waste treatment systems which would handle both household and industrial wastes, provided that the wastes were compatible and did not contain toxic substances. Congress recognized at that time that joint industrial--municipal treatment is a practical and effective method of dealing with the wastewater treatment problem in our metropolitan areas.

c. The Stafford Amendment singles out one class of industry -- those plants discharging more than 50,000 gallons of wastewater per day-- and treats them as second-class citizens. In contrast to all other users of municipal treatment plants -- homeowners, commercial establishments and small industries -- these larger dischargers would be singled out for a "negative subsidy." Federal appropriations could not be used for their share of the treatment facility. In effect, the tax dollars which this single class of industry contributes are not determined to be as good as the tax dollars contributed by all other classes. In essence, it singles out one characteristic -- volume of wastewater effluent -- and makes those industries, and no others, ineligible for Federal grants.

d. This arbitrary classification of certain industrial users as second-class citizens is not based on any criteria of profitability. ability to pay, or contribution to the nation's economy, etc. A large and profitable enterprise which has a waste flow under 50,000 gallons per day is allowed to benefit from Federal grants; a marginal industry whose contribution is above 50,000 gallons must pay for its capacity allocation. This is manifestly unfair and discriminatory. It should also be noted that this arbitrary classification can also adversely impact companies on a plant-by-plant basis. Even large profitable corporations frequently have marginal facilities in older urban areas which cannot compete with new, more modern plants which are located elsewhere and owned by the same corporation or by its competitors.

e. The Stafford Amendment also works in direct controvention of other Federal programs designed to encourage industries to remain in urban areas. Examples are HUD's Urban Development Action Grant Program and the Department of Commerce's Economic Development Administration Grant Program. These programs frequently provide grant funds for sewers, water lines, and other public improvements in order to help keep industry in urban, high-unemployment areas. The Stafford Amendment will have precisely the opposite effect.

f. The effect of the Stafford Amendment will be to seriously impair the continued existence of many old and inefficient industrial facilities in urban areas. Marginal industries can ill-afford the large sums of money required to fund local treatment capacity. Those industries which are profitable may find it even more tempting to leave urban areas for new facilities in rural areas where cheaper, independent treatment is possible. Economic impacts of such an exodus would be substantial.

g. The situation of the small brewer vis-a-vis the Stafford Amendment is instructive. Small brewers may be unable to raise the necessary capital to finance their own treatment facilities, and the reality of plant closings, dislocation, and the related economic hardship may be expected to occur. Consideration of historical trends in the brewing industry bears out this possibility. According to records compiled by the Department of Treasury's Bureau of Alcohol Tobacco and Firearms, in 1935 there were 750 breweries in the United States. Since that time, the number of brewing companies has declined to 43 which operate a total of 85 plants. Decline in the number of breweries doing business has been steady over the years, and among the reasons for the decline is that small brewers are often unable to build modern efficient plants and, therefore, cannot produce malt beverages as cheaply as larger operations. Small brewers are encumbered by the high cost of distribution and are hard-pressed to provide a product at a competitive price with larger companies. The inflation experienced in agricultural and packaging costs has added to the profit squeeze and accelerated the demise of the small brewer. Add to this already heavy burden, the need to raise capital to participate in POTW improvement projects, and one can easily forsee even more plant closings. Small brewing companies are typically located in older muncipalities and discharge to antiquated POTW's which require extensive upgrading. In addition, it is likely that the brewing company will represent the major discharger to that municipal system. As a consequence, since

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financial participation is based upon proportionate loading of BOD, suspended solids and flow, the brewer in that situation will be the most heavily impacted by the upgrading of a municipal plant.

h. The Federal construction grants program of POTW's has been criticized as being far too costly. In the past few months, EPA has been evaluating several alternatives for reducing the costs of this program. These analyses show that the Stafford Amendment would eliminate only eight percent of the construction grant funding requirements. While eight percent sounds like a small enough component not to matter, it disguises the fact that there are many marginal industrial operations which would be adversely affected if government funding were not available, and that there would be substantial increases in user charges to non-industrial POTW customers if industrial users reduced or eliminated their waste load contribution. EPA also recognizes that other alternatives exist for achieving greater savings without reducing construction grant funding, and without creating the negative economic and employment impacts of the Stafford Amendment.

i. Lastly, industry sees that Stafford Amendment as resulting in an adminstrative nightmare, even if one agrees with its goals. Most urban POTW's, for example, serve many large industrial dischargers. If those POTW's must proceed with major upgrading projects, how would agreement be reached as to the cost-sharing among all users contributing over 50,000 gallons per day? What would happen if one or more industries could not afford to pay their calculated share of the new treatment plant -- would they have to close their doors? Also, USBA believes that there will be serious time lags due to the need to carry out complex negotiations with each of the affected industries.

In summary, USBA feels that the Stafford Amendment represents poor public policy. It will have only a nominal effect in reducing Federal expenditures for treatment works. It will most certainly have negative environmental, economic and employment impacts, and will hasten the de-industrialization of urban areas. As such, USBA supports a construction grants program designed to address the most pressing environmental needs consistent with sound economic policy. Such a grants program should treat all users of POTW's, whether they be residences, commercial establishments, small industries, or large industries, on an equal footing.

Cordially,

Henry B. King

HBK:cam

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HEWLETT
PACKARD

1501 Page Mill Road, Palo Alto, California 94304, Telephone 415 857-1501, TWX 910 373 1267

December 24, 1980

Mr. Henry L. Longest II
Industrial Users Study
Municipal Construction Division (WH-547)
Room 1217A
401 M Street S.W.
Washington, D.C. 20460

Dear Sir:

The following comments are submitted on the recent amendment to section 3 of the Federal Water Pollution Control Act, Public Law 96-483.

Nearly all of Hewlett-Packard facilities discharge to publicly owned treatment works. Initially, our discharges are less than 50,000 gallons per day but later exceed this figure as we develop a given site. We don't object to paying our fair share of the cost of sewage treatment.

We support in principal the amendment to Public Law 96-483 which disallows federal grant funds for use "to treat, store or convey the flow of any industrial user into such treatment works in excess of" 50,000 gallons per day. The administrative and monitoring burden to calculate and collect construction costs from industry should be minimized. This was not the case with proposed industrial capitol cost recovery which required special monitoring systems of industry and a new staff of inspectors and accountants for each public owed treatment works to properly allocate costs.

Yours truly,

Glenn Affleck

Glenn Affleck
Technical Regulation Manager

DeSoto, Inc.
ADMINISTRATIVE AND RESEARCH CENTER
1700 SOUTH MOUNT PROSPECT ROAD, DES PLAINES, ILLINOIS 60018 TELEPHONE 312-391-9000

WILLIAM L. LAMEY, JR.
Vice President – Finance
312-391-9020

December 31, 1980

Mr. Henry L. Longest II
Deputy Assistant Administrator for Water
Program Operations (WH-546)
Industrial Users Study
Municipal Construction Division, Room 1217A
U. S. Environmental Protection Agency
401 M Street SW
Washington, DC 20460

Re: Grants for Construction of Treatment Works,
Exclusion of Major Industrial Users

Dear Mr. Longest:

DeSoto, Inc. is a diversified manufacturer of consumer and industrial paints, furniture, fireplace furnishings and household detergent products. Many of our manufacturing facilities would be considered "major" industrial users under the federal criteria. As such, we wish to comment on Section 3 of the recent amendment to P.L. 96-483, The Federal Water Pollution Control Act (FWPCA), which would prohibit after November 15, 1981 the use of federal grant assistance for construction of any portion of a publically owned waste water treatment works designed to serve a major industrial user.

It is our understanding that the amendment is intended to correct the longstanding problem of excessive costs associated with the recovery of industry's share of federally funded construction of sewage treatment plants. In the past, federal grant money was available for construction of industrial capacity at publically owned treatment works, but had to be paid back over many years by user industries. Later it was discovered that the administrative costs of collecting the money far exceeded the cost of constructing the portion of the facility used by industry.

We sympathize with the problem. However, we strongly believe the present solution--that is, prohibiting after November 15, 1981 the use of any federal grant funds for construction of treatment capacity for industries which discharge more than 50,000 gallons per day--may have a serious negative impact. Communities receiving federal grants after November 15, 1981 will be at a distinct disadvantage in holding existing industry and attracting new industry.

Many communities have already used federal grant funds to construct sewage treatment plants which have a portion of their capacity dedicated to major industrial users. These communities have also built larger sewage treatment plants than they currently need. This excess capacity will serve as a reserve for both future domestic and industrial users. Neither existing major industrial users or industries which may choose to locate in these communities in the future would bear any of the cost of construction of these sewage treatment plants.

Contrast this favorable situation with that of a community which has waited eight years to be eligible for federal grant funds to build sewage plants that meet federal requirements. Such a community must now give industrial users a costly choice. Either immediately provide funds for constructing the portion of the sewage treatment plant which treats the industrial waste water, or cease to discharge more than 50,000 gallons per day. Many existing businesses will not be able to afford the cost of construction. Disposing of waste water by other means also may prove too costly.

Thus, the new amendment will divide this country into communities which provided "free" industrial waste water treatment capacity and those which require payment. This does not appear to us to be an equitable method of solving the industrial cost recovery problem. Furthermore, the amendment appears to provide a large roadblock to getting U.S. industry on its feet and providing new jobs.

Very truly yours,

William L. Lamey, Jr.

William L. Lamey, Jr.
Vice President - Finance

WLL:cr

THE PROCTER & GAMBLE COMPANY

HILLCREST TOWER
7162 READING ROAD

CINCINNATI, OHIO 45222

December 29, 1980

United States
Environmental Protection Agency
Industrial Users Study
Municipal Construction Division
(WH-547) Room 1217A
401 "M" Street, S.W.
Washington, D.C. 20460

Gentlemen:

The Procter & Gamble Company appreciates the opportunity to comment to the U.S. E.P.A. on the affect of the Stafford Amendment both on industries which discharge into publicly owned treatment works (POTW) and on the POTW's themselves which receive the industrial waste for treatment.

Procter & Gamble is a diversified company which produces synthetic detergents, paper products for the consumer, food products, toilet goods, and industrial chemicals. Many of our facilities are located in urban areas where we discharge our biodegradable, compatible wastes into POTW's for treatment. We pay our proportional and fair share of the cost of treatment of these wastes, including O&M costs as well as retirement of the local debt. We have had much experience in the joint treatment of industrial and domestic wastes in large, centrally located waste treatment systems operated by the municipality or other waste treatment authority.

We are aware of the many benefits of a regional system which can accrue to the general public. Perhaps the chief benefit of the regional system is that of reduced costs because of economies of scale-up.

Other advantages of a joint or combined treatment of industrial and domestic wastes in a regional system are outlined in the attached discussions written by the consulting firm of Malcolm Pirnie.

The Stafford Amendment would tend to discourage regional treatment of waste waters, that is joint treatment of industrial, commerical, and domestic wastes in a regional system and therefore lessen the benefits of regionalization. To elaborate further on why we feel the Stafford Amendment should be repealed, we wish to offer the following discussion.

The repeal of the requirements of industrial cost recovery (ICR) was a benefit not only to the industries served by POTW's but to the entire population served by the POTW's and to the cities involved. The objectives which lead to the inclusion of ICR in the Clean Water Act were most laudable, but the pragmatic results of the requirements were far from laudable. A requirement which was intended to produce equity instead produced inequity; a requirement which was supposed to lead to conservation produced no conservation; a requirement which was supposed to be administratively acceptable resulted in administrative chaos. Virtually all parties agreed that ICR, which in theory was reasonable, in actual practice was almost totally unreasonable.

The Stafford Amendment, which accompanied the ICR repeal like the ICR provisions which it replaced, has objectives which also are most laudable, but unfortunately we believe this amendment will result in the same types of problems as ICR. In fact, the potential problems in some instances appear to be worse than those that resulted from ICR.

The principle problem is that the Stafford Amendment requirements, like those of ICR, will be almost impossible to administer. One problem clearly will be to determine what portion of a POTW is required for public and commercial needs, and thus is eligible for a federal grant, and what portion is for industrial use, and thus is not eligible. While this may seem simple in the case of a small city with a single industry, particularly where a new POTW is involved, it becomes almost indescribably complex in a larger city with hundreds and even thousands of industries, particularly where it involves the expansion and upgrading of existing facilities.

For example, let's assume a POTW requires a total of five new aerators for a new aeration basin for the entire needs of the community (that is industrial, commercial, and domestic waste). Let's say the industrial load represents 10% of the total load. Therefore, one half of an aerator is needed for the industry load. A POTW must purchase four aerators, then set aside money for half an aerator, and await industry payment for the other half. And how about the basin itself? How can a basin be built partially by federal grant money and partially by industry money? How is the bookkeeping managed? The potential for procedural complications, red tape, and delay is very large with the Stafford Amendment. It should be noted that the repealed ICR approach did not present these complicated problems of who finances what portions of a new construction.

Delay has been the chief flaw in the construction grant program for municipal waste water treatment facilities. Since 1972, the time of the passage of the original Clean Water Act, something over $30 billion has been approved for specific projects, and yet only slightly less than $3 billion worth of facilities are on the line actually treating waste. Very commendably, the U.S. E.P.A. is studying ways to cut the red tape and expedite the construction of these waste treatment facilities. Congress, too, has addressed itself to this problem. But on the other hand, the Stafford Amendment while not intending to do so will further exacerbate this unacceptable situation.

The problems involved in determining a precise portion of a POTW facility to be used by industry will be exceeded only by the difficulties financing the industrial portion of that facility. Because industry will have no equity in the facility involved, it will be almost impossible for industry to use any of the commonly available methods of commerical financing. For example, the industry will find it totally impossible to borrow or sell bonds to build a facility in which it will have no equity. On the other hand, financing a new facility may be even more difficult for the city involved. With no federal financing, the industrial portion would have to be 100% financed locally by industrial capital. Many cities, which currently have significant problems in raising money in the capital market because of their credit standing, would find it essentially impossible to raise money for the industry portion of a new or expanded POTW. In some cases neither industry nor the city would be able to finance the industrial portion, and the result could be chaos. While one intent of repealing ICR was to eliminate the administrative nightmare which it caused, the Stafford Amendment requirement would appear to cause many of the same or worse administrative problems, and place the cities and the POTW's right back where they started prior to the repeal of ICR.

The rationale for inclusion of the Stafford Amendment was two-fold:

1. A concern that federal funding of joint municipal industrial POTW's systems resulted in an unacceptable subsidy to the industry involved.

2. The inability of the federal government to meet anticipated funding requirements for the construction of a grants program.

The question of subsidization was a principle focus in the arguments to eliminate ICR and the same reasoning that lead to the repeal of ICR applies to the Stafford Amendment.

A cost to industry for waste treatment in POTW's is in a number of cases appreciably higher than self treatment and constitutes a major disincentive to remain in or to locate in an urbanized area. Federal funding often serves to do no more than reduce or eliminate this disincentive. (This problem was extensively analyzed in a report "factors contributing to cost differences between public owned and industrial waste treatment facilities" prepared by Malcolm Pirnie, Incorporated, consulting environmental engineers for the National Council for Air and Stream Improvement. A copy of this report is attached.)

The total community, not just industry, benefits from the joint treatment concept. Joint treatment, another form of regionalization, results in major economic advantages to the community resulting from the economies of scale-up. There are also additional benefits in aesthetics from centralization of waste treatment, and benefits in increased control of potential adverse environmental factors resulting from a multiplicity of waste treatment facilities scattered all over an urban area. (There factors are also covered in the attached report.)

To the degree that a subsidy does exist, more often than not it is a subsidy that supports the economic health of the community involved. The community benefits from its ability to retain industry which otherwise might be forced to relocate. Providing facilities which make it economically feasible for new industry to locate in the area also benefits the community.

In terms of equity, the imposition of either ICR or the Stafford Amendment produces the opposite affect; it tends to punish those industries which have located in an urban when there was available waste treatment. These industries now may, in affect, be locked by economics into the urban area and may find that due to the requirements of the Clean Water Act they now face excess costs for waste treatment which are substantially more than those of their competition who have located in urban areas.

The question of government's inability to meet the anticipated funding needs of the construction grants program for sewage treatment plants is less clear. However, it can be postulated that the Stafford Amendment can well have the affect of increasing the government's costs. While there clearly would be some short term reductions in the federal funds required for the waste treatment program itself by the imposition of the Stafford Amendment, the fact that the Stafford Amendment can inhibit industry from continuing in or locating in an urban area could have a negative impact on the health of those areas. This could result in demand for far more costly subsidies for the urban area than would be involved in the federal grants program. In addition, in terms of fairness, it can be pointed out that the industrial user is as much or more of a tax payer, both to the federal government and to the local area, as the individual citizen.

Thus, where it has been determined to be in the national interest to provide funding for waste treatment, it should be equally in the national interest to provide funding which serves to maintain the economic health of the community involved which includes, of course, industry. If in fact federal funding for POTW's must be restricted, it would appear to make far more sense to reduce the percentage of federal funds for POTW projects, to reduce the degree of future capacity which could be funded, or to restrict the types of facilities which could be funded by the grants than it would be to eliminate one class of user, a class of user whose continued presence is critical to the success of the urban areas involved. This appears to be an area where it is clearly in the country's best interest to take the long term view.

It has been suggested by a number of people, including administrators at the E.P.A., that the real concern of the federal government in terms of funding POTW's is not initial cost, which will occur over the next five to ten years, but rather is the continued economic viability of the POTW's and, in particular, their ability in the future to operate, maintain, replace, and expand the facilities that are being constructed now at the present time with federal funds. By revising the Stafford Amendment to focus on this need, it appears to be possible to remove many of the potential problems and inequities which could result from the Stafford Amendment while retaining the most desirable, laudable objective of the amendment, the long term financial viability of waste treatment in our urban areas. It is suggested that this can best be accomplished by revising the Stafford Amendment to state the following: After November 1, 1981, federal funding will not be provided for capacity required for industrial waste unless the POTW has the authority to pass revenue bonds and levy sewer service charges on all users of the facilities to pay for the bonds. This suggested change in the law eliminates the disincentive to remain or to locate in the urban area and in fact increases the incentive to stay in the urban area. This version of a "Stafford Amendment" helps to assure the economic viability for the waste treatment facility and eliminates or at least reduces the likelihood that such facilities will require federal assistance in some future time.

In summary, while we agree that the intents of the Stafford Amendment are commendable, we are certain that the Stafford Amendment as now written is not in the best interest of society. It can harm economic growth in the urban areas where such economic growth is vital. There are other better ways to insure funds for the proper operation, maintenance, and expansion of POTW's. We will certainly be glad to discuss this further with the appropriate people and the E.P.A.

THE PROCTER & GAMBLE COMPANY

R. C. Glover
J. F. Byrd

R. C. Glover
Leader, Environmental
Control Section

J. F. Byrd
Manager - Engineering
Government Relations for
Energy and Environment

Attachments

dt/2715E

Mead

World Headquarters
Courthouse Plaza Northeast
Dayton, Ohio 45463

Telephone: 513-222-6323

December 30, 1980

Industrial Users Study
Municipal Construction Division
(WH-547)
Room 1217A
401 M Street, S.W.
Washington, D.C. 20460

Dear Sir:

The purpose of this letter is to offer comments of the Mead Corporation ("Mead") on the potential effect of recent amendments (P.L. 96-483) to the Federal Water Pollution Control Act concerning industrial cost recovery, as requested at 45 Fed. Reg. 79573.

Mead owns and operates paper mills in several cities that discharge their wastewaters to publicly-owned treatment works ("POTW's"); namely, Cincinnati, Ohio; Lynchburg, Virginia; and Menasha, Wisconsin. The experience in each city is different with respect to industrial cost recovery but certain general observations may be made when considering the application of the new law.

As a result of the amendments to the Clean Water Act, existing industrial users of POTW's will be adversely affected. Users such as Mead will be forced to raise significant amounts of capital without federal assistance if and when POTW's upgrade existing treatment facilities. Furthermore, the existing industrial contributor to a POTW will be unfairly burdened if the POTW expands treatment capacity to serve a larger population, in effect presenting the user with a no-win choice: either raise the necessary capital to pay for the expansion (which may not benefit the existing user at all) or withdraw from the system.

The fair cost to the industry where a POTW upgrades existing facilities is the true incremental cost; the difference in cost between upgrading just for the community portion and upgrading the be exempt if they discharge less than 50,000 gallons per day or if their discharge represents less than the specified percentage of the total POTW flow.

Mead believes that the new amendments will considerably slow the construction grant program because of the lack of a fair process to deal with industry that is already discharging to POTW's. This conclusion is shared by the American Paper Institute (API), and they have developed further information which is being submitted under separate cover. Mead endorses and joins with the API position.

Mead appreciates the opportunity to comment on this important issue, and we hope that these thoughts can be included in EPA's report to Congress and considered in the development of any regulations arising out of the 1980 amendments. We also reserve the right to comment in more detail when specific regulations are proposed.

Very truly yours,

Russell E Kross

Russell E. Kross
Director
Human and Environmental Protection
Department

REK/rlr

facility for the total flow from the industry and community portions. Any amount in addition to such an incremental cost results in an unfair burden on industry. Where a POTW adds treatment capacity to serve a larger area than was being served when the industry first tied into the POTW, the fair cost to existing industrial users is zero.

If industry is required to pay for a portion of a POTW, then any portion of a POTW that has been directly financed by an industry should be the legal property of that industry, and as such, could be sold to others by the industry without involvement of the POTW.

Based on past history, grants to state and local governments for construction of POTW's after May 15, 1980 will probably include excess capacity for later use and/or infiltration. Such excess capacity might, in fact, be available after construction for new large industrial contributors. An existing industrial discharger's contribution should be based on its portion of total design flow, rather than its portion of existing flow. For example, a user discharging one million gallons into a POTW designed to treat 20 million gallons, but presently receiving only 10 million gallons, should be required to contribute based on a five percent of capacity figure, as opposed to a ten percent figure. Additionally, it would not be fair if the new industrial source were not required to pay a fair share where the discharge begins after the POTW is already funded and completed, while an existing industrial source would have to pay. Any system requiring industrial users to pay for a portion of a POTW should avoid this inequity.

The 50,000 gallons per day exemption in the amendments is an arbitrary figure. In large POTW's, 50,000 gallons per day may be a relatively insignificant discharge. A more equitable system would have the 50,000 gallons per day exemption be one of two criteria. The second criterion would be a set percentage (e.g. ten percent) of the total facility. Industrial users would then

Tom O'Lean

CDM

environmental engineers, scientists, planners, & management consultants

CAMP DRESSER & McKEE INC.

One Center Plaza
Boston, Massachusetts 02108
617 742-5151

DEC 15 1980
WCB

December 8, 1980

DEC 12 1980
WH-547

Industrial Users Study
Municipal Construction Division (WH-547)
Room 1217A
401 M Street S.W.
Washington, DC 20460

Comments on December 1, 1980
Federal Register Notice Titled
"Grants for Construction of
Treatment Works, Exclusion of
Major Industrial Users; Impact
Analysis

Gentlemen:

As has been requested in the above Federal Register notice, the purpose of this letter is to submit comments on the above.

The question of retroactive application of regulations by EPA has been of considerable concern for the past several years. Although the subject is not an EPA regulation, according to this notice the recent Congressional amendment to Public Law 96-483 in effect is at least partially retroactive because it indicates that any "project proposed by a grantee which is carrying out an approved project to prepare construction plans and specifications for a facility to treat wastewater, which received a grant approval after May 15, 1980" will not receive a Federal grant after November 15, 1981 for construction of that portion of the plant which is constructed to serve major industry's flows (over 50,000 gpd).

This amendment, for all practical purposes, simply redirects the ICR program but does not repeal its philosophy. In fact, it makes it worse! Does this affect large interceptor projects? How does this affect on-going work in, say, a large city? How will anyone know whether some "major" industrial flows are, or are not, included?

Between now and November 15, 1981 (a period of only eleven months) it will be practically impossible for anyone to complete the design of a wastewater treatment plant which contains industrial flow capacity and get all the approvals necessary for and receive a construction grant offer and award.

If this amendment stands, a municipality will not know whether to spend funds for design of a wastewater treatment facility with or without capacity for industry. Logic would say that municipalities should get industrial agreements signed up before the design starts. Logic would also indicate that industry would not be willing to sign agreements until it had a new study completed as to whether it would now be cheaper to go it alone.

Consequently, this amendment will do nothing positive to the program. It will, at best, cause a considerable delay which will be needed by communities to attempt to re-decide what to do with industrial wastewaters. At worst, it may result in many industries deciding to go it alone with the requirement of more EPA enforcement and the possible proliferation of individually-treated discharge to the wastewaters of the nation.

Recognizing that water pollution control is a national effort, it appears that the Federal government should let the grantee decide who pays for what on its treatment plants, letting EPA pay its usual percentage of the entire needed plant. It has been proven in the last several years since efforts have been made to enforce an ICR philosophy that nothing but confusion and delays results. Industry serves the people, and people along with industry, pay Federal taxes. This amendment will only cause more problems for the nation's water pollution control efforts and it should be repealed.

Very truly yours,

CAMP DRESSER & McKEE INC.

Charles A. Parthum

Charles A. Parthum
Senior Vice President

CAP/cmp

cc: Henry L. Longest II
David Luoma
Joseph Franzmathes

CH2M
HILL
engineers
planners
economists
scientists

December 30, 1980

P101.20

Mr. Henry L. Longest II
Deputy Assistant Administrator for
Water Program Operations (WH-546)
Industrial Users Study
Municipal Construction Division (WH-547)
Environmental Protection Agency
Room 1217A, 401 M Street, S.W.
Washington, D.C. 20460

Dear Sir:

Subject: Request for Comments Regarding PL96-483
Section 3 Federal Water Pollution Control Act

As requested per the Federal Register of Monday, December 1, 1980, I am happy to enclose some comments regarding the recent amendment to Public Law 92-500, which was issued as Section 3 of the PL96-483 Federal Water Pollution Control Act. My comments are based on my personal knowledge of numerous municipal wastewater management programs, many of which relied on PL92-500 funding. As you may know, CH2M HILL is one of the largest engineering and economics consultants for POTW's. I serve as Director of Water and Wastewater Economics and am responsible, among other assignments, for directing all the firm's wastewater projects' work related to cost effectiveness analyses and financial management programs (including user charges and industrial cost recovery studies).

In addition to comments addressing requested topics listed in Section 4 of PL96-483, I have added a few additional remarks in Section 7:

1. Effects on construction of POTW's
2. Effects on industrial participation in POTW's
3. Treatment of industrial discharges
4. Proper degree of Federal and non-Federal participation in POTW's
5. Effects on rural, high unemployment, or economically distressed areas, and

Portland Office
200 S.W. Market Street, 12th Floor, Portland, Oregon 97201 503/224-9190 Cable: CH2M HILL

6. The 50,000 gallons a day cutoff criterion

7. Additional remarks.

1. EFFECTS ON CONSTRUCTION OF POTW's

Industries served by POTW's relying on future Federal Water Pollution Control Act grant funds will no longer be eligible to receive interest-free loans provided under previous PL92-500 financial arrangements. These industries now face the problem of securing and financing industrial wastewater treatment for their facilities. This may result in delays in POTW construction since many industries will not be capable of quickly selecting the most cost-effective solution or arrange for financing.

Our experience has shown it to be extremely difficult to get industries to commit themselves to a costly long-term financial obligation related to sewer services, let alone a lump-sum amount to prefinance their respective reserved capacity. Existing regulations such as the Letters of Intent to be signed by significant industrial customers are insufficient instruments to serve as binding legal documents addressing the needed financial commitment.

The issue of prefinancing industrial capacity or obtaining long-term financial commitments will be more significant in small to medium-sized communities where such individual industrial users might amount to significant users in terms of their percentage use of the design capacity. Metropolitan POTW's probably need fewer long-term financial agreements with industries than small to medium-sized POTW's. It is reasonable to conclude that more delays and problems associated with the planning and construction of facilities will occur in small to medium-sized communities than in large communities.

2. EFFECTS ON INDUSTRIAL PARTICIPATION IN POTW's

Many large industries no longer able to use Federal interest-free loan financing might now obtain their own treatment facilities and discharge permits if this represents their most cost-effective option. For industries of large size and strong financial capability, this might be possible. Industries which cannot afford to provide in-house treatment facilities will probably consider various forms of pretreatment to minimize the total cost of sewage treatment, including capital cost and operation and maintenance charges. The degree of pretreatment provided will depend mainly on the rate structure and rate level adopted by the POTW serving these customers. In order for such industries to make rational decisions, it will be important that rates used by POTW's are predictable so industries do not have to assume a high degree of risk associated with the POTW rates.

3. TREATMENT OF INDUSTRIAL DISCHARGES

For reasons described in the two preceding sections, it appears likely that less industrial waste will be treated by POTW's in the future compared with what would have been treated without the change in the ICR regulations. Consequently, more industrial waste will be treated or pretreated by industries themselves. The resulting public policy questions of private sector discharge permits remains to be analyzed. It is likely that a high degree of public concern will develop regarding proper disposal methods of residual toxic and nontoxic wastes when a large number of industries switch to internal treatment and discharge of wastewater.

4. PROPER DEGREE OF FEDERAL AND NONFEDERAL PARTICIPATION IN THE FUNDING OF PUBLICLY-OWNED TREATMENT WORKS

The controversy surrounding the initial ICR regulations will not cease with the recent amendments to PL92-500. On the contrary, some of the issues still remain to be satisfactorily solved; for example, the relative competitive position of industries currently served by grant-financed POTW's. Such industries in essence are the beneficiaries of interest-free loans provided by the Federal government. Other industries not served by federally-funded treatment works are facing higher relative production costs since they will have to secure industrial waste treatment from private, more expensive financial sources. Combined annual capital and interest costs of privately-financed capacity will be higher compared with the industries already being served by grant financed POTW's.

The argument that industries should not become recipients of Federal funds still exists. In my opinion, the proper question is why should any user class be excluded from grant funding? With regard to the industrial users, it can be argued that they contribute taxes similar to residential and commercial customers.

In terms of equity between customer classes, it seems imperative that the grant funding level be based on the financial capability of the Federal (and nonfederal) authorities and that such funding levels be uniform for all user classes. For example, if financial resources are too constrained to continue 75 percent grant funding, then this participation rate should be lowered to a level consistent with Federal financial resources.

In addition, Federal law should require that only cost of service-based user charges be used. Only then will user charges become more predictable and fair for all user classes. User rate norms should apply to capital as well as O&M costs. Such rate reform will minimize the chances that industries are lured away by subsidies offered by other utilities. This will lower the financial risk to the remaining users or bond holders of a POTW.

5. EFFECTS ON RURAL, HIGH UNEMPLOYMENT OR ECONOMIC DISTRESS AREAS

For some of the reasons discussed above, it appears likely that rural, small and medium sized communities will face serious planning problems under the current financial recovery legislation. Restated, this is mainly caused by the fact that only large urban POTW's, where individual industrial users constitute a small percentage of total usage, will be able to allow industrial users to utilize their facilities without making elaborate financial arrangements to secure long-term payments for industrial capacity. Since most industries are not able nor willing to commit themselves to long-term financial commitments to provide wastewater treatment facilities, it stands to reason that many industrial users will consider moving towards the larger metropolitan areas in order to take advantage of the lower cost of securing treatment facilities use. Consequently, many rural areas, small cities and medium-sized cities will have to face situations where they might lose industries, especially "wet" industries. Obviously, this will negatively affect the economic base of the area and worsen unemployment conditions and the general economic well-being of such areas. Since economically distressed areas quite often include rural areas, the existing law might exacerbate their economic distress.

6. 50,000 GALLONS PER DAY CUTOFF CRITERION

Our staff has performed many sewer rate studies which incorporated financing and user charge-related problems. We find it quite likely that the enforcement of the 50,000 gallons per day equivalent domestic strength will become even more difficult to administer in the future. Already instances exist where industries have made arrangements to separate their sewer services to reduce their equivalent flow to less than 50,000 gallons per day.

In addition, the cutoff point itself is arbitrary and might result in situations where an industry discharging just over 50,000 gallons per day is forced into an uncompetitive situation versus a similar industry whose discharge is somewhat less than 50,000 gallons per day. The criterion is arbitrary and should be eliminated. I doubt that it would survive a serious legal challenge.

We see no merit in any arbitrary cut-off points. As argued above in Section 4, our best solution to the grant funding question is to let all user classes benefit to the same extent. However, if Congress were to maintain that grants may not be utilized by industry but are only meant for private citizens, it would be less arbitrary, and therefore preferable, to only allow residential customers to benefit from the grant. Most user charge systems could accommodate such a change. An added benefit would be that more communities could receive federal grants since grant funds per average community would decrease. This would be our recommended "second best" solution.

7. ADDITIONAL REMARKS

Since projects for private industry must typically be capitalized over a shorter period and higher interest rates must be paid compared with public agencies, annual cost of treatment will be substantially higher for many industries. Large industries with good potential for reasonable cost-effective (pre)treatment arrangements will most probably secure their own treatment facilities.

For marginally sized industries or industries that cannot afford the cost of in-house treatment, more time will be needed to determine how they can continue to be served by the POTW. For example, some form of pretreatment could be implemented in order to fall under the 50,000 gallons per day cut-off point. The combined effects on POTW construction schedules may be significant. When large industries drop out, the previously targeted design capacity will be too high. At this point, a smaller facility will have to be designed. Since economies of scale usually result when design capacity increases, it is clear that when capacity decreases, diseconomies of scale occur. The implication is that the unit rates to the remaining users in a POTW will be more expensive compared with the larger scale utility.

Inequities will develop between industries which were previously grant funded for their waste treatment versus new similar industries that will not be grant funded under the current legislation. These inequities have increased now that ICR payments no longer need to be made. New industries are thus in an inferior competitive position. Since the acclaimed economic policy of the United States is to promote fair competition, it seems ironic that the current grant funding rules negate this goal.

Again, I do not advocate excluding any given user class from grant eligibility but find that the "second best" solution discussed in the previous paragraph would be easier to administer than the current program.

I sincerely hope that these comments will help formulate and enact a more equitable and manageable Federal Water Pollution Control Act.

Sincerely yours,

C. Kees Corssmit, Ph.D.
Director
Water and Wastewater Economics

cc:tb:118K

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